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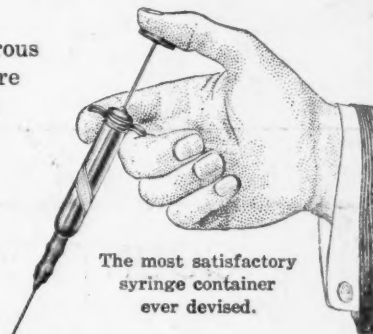
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The Journal of the Michigan State Medical Society

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Vol. XI

BATTLE CREEK, MICHIGAN, MARCH, 1912

No. 3

ORIGINAL ARTICLES

NITROUS OXID-OXYGEN ANESTHESIA*

RICHARD R. SMITH, M.D., AND REUBEN MAURITS, M.D.
Grand Rapids, Mich.

Nitrous oxid-oxygen has been tried in a number of surgical clinics in this country and, after several years' trial, has been adopted as an advantageous form of anesthesia. In no instance of which we are aware has it entirely replaced ether and chloroform; nor, on the other hand, has it often been given up after a fair trial, though the indications for its use seem to vary considerably with different men. That it is still used, after mature consideration, by a number of our best surgeons would seem to indicate that it possesses real advantages. We may also assume that it has certain disadvantages that in critical minds have led to the adoption of a number of restrictions.

The object of this paper is to present the results of our experience in the 410 cases (132 of which were laparotomies), in which it has been employed; to give our statistics, impressions and methods, and to suggest its trial to those who can obtain a proper person to administer it.

* This paper was made the subject of the chairman's address before the Gynecological and Obstetrical Section of the Michigan State Medical Society, Sept. 27, 1911.

We believe that the expert anesthetizer is really the key to the situation and that surgeons who are dependent on inexperienced, uninterested men had better wait until such can be obtained. Close study and experience are necessary to obtain satisfaction. Had we been governed by the results of our first ten or twenty cases, we would certainly have discontinued its use. We were made uneasy by the cyanosis and occasional check in respiration and annoyed by the rigidity and struggling. With further use and with better ideas as to what patients should or should not receive it, it has grown in favor with us and at present we are employing it in something over half of our operations. We have, we believe, fully recognized the disadvantages noted by others. After all, the only one worthy of serious consideration is the rigidity which may so embarrass the surgeon as to more than offset the advantages of lessened toxic effects, nausea, depression and discomfort. The cost of the gas is of no great moment. In 388 cases it has averaged \$3.40 per hour — surely but very little when we consider

the total cost of operative work.¹ Excessive bleeding has been spoken of by others; we have had no trouble on this account.

The still rather prevalent idea that the anesthetic is adapted only for short operations is, of course, without foundation and probably arises from the use of nitrous oxid by dentists for teeth extraction. The oxygen in addition gives us a very different agent. In one case we used it for three hours and Dr. Maurits, in another, administered it for three hours and thirty minutes. One and a half to two hours in difficult surgical cases is a common occurrence with us. We have used it for long and short operations alike, but it is markedly more valuable in the former, since in the latter the bad effects of ether are not so great.

The advantage of nitrous oxid-oxygen over ether and chloroform is, generally speaking, its lessened toxic effects. This is shown in the clear mental condition following operation, the distinct lessening of nausea, the quicker regaining of the appetite and the prompter recovery from operation. We have had no toxemias or deaths that could in any way be traced to it. We have had no pneumonias. We have, on a number of occasions, successfully operated on patients extremely ill from prolonged sepsis or other causes that we would have hesitated to operate on with ether.

Some vomiting follows this anesthetic, as with all others, but results have been with us much better than those obtained with ether, much as the latter has been improved. We have kept record of this

in 207 cases *covering three days following operation* and including vomiting from whatever cause. Some of them were patients who were vomiting before operation (about 5 per cent.), due to causes for which they were operated.

In 66 per cent. there was no vomiting;² 8 per cent. vomited but once, 8 per cent. vomited twice, 5 per cent. vomited three times. In 87 per cent. then there was no vomiting at all or not over three times. Seventy per cent. did not vomit at all during the twenty-four hours following operation.

In 118 cases (not abdominal), 71 per cent. did not vomit at all, 9 per cent. vomited but once, 9 per cent. vomited twice, 5 per cent. vomited three times; 94 per cent. then did not vomit at all or more than three times.

In eighty-nine abdominal sections 57 per cent. did not vomit at all, 6 per cent. vomited once, 11 per cent. vomited twice, 7 per cent. vomited three times; 81 per cent. then did not vomit at all or more than three times.

Patients will, of course, vomit from other causes and when it has been at all prolonged, we have been able in most instances to find a definite reason for it other than the anesthetic. Nausea following operation, however, has materially decreased as a source of suffering. A quicker regaining of the appetite and of the color and strength have been noted, though we have believed it impossible to satisfactorily record such results. Decreased vomiting has resulted in decreased pain following operation. Perhaps because any rough manipulation is apt to be followed by more rigidity and because we have not feared to take a little more time in operation, we have, we believe, been more gentle and this also has seemed to us to

1. It might be well to add that we have had but very few objections on the part of our patients to this additional cost. They have been quick to recognize the advantages—more so than with most of one's innovations. An operation is usually regarded as a most unpleasant experience, as it often is, and they are glad to have anything which will make it less so.

2. Decimals have been omitted in these statistics.

have produced a like effect. Surgeons aspire not only to obtain safety in operative work and perfection in eventual cure, but to make the ordeal of operation as comfortable as possible. The ideal convalescence is one in which there is no nausea, no pain or discomfort, in which the taking of food is not interrupted or the confinement to bed and invalidism prolonged beyond the period necessary to the prompt healing of wounds and the regaining of health lost through the disease for which the operation was done. Surgeons are seldom able to attain such ideals, but nitrous oxid-oxygen has brought us, we believe, a little nearer.

Unfortunately this anesthetic has a limited use. Generally speaking, the anesthetic is not as deep as with ether and, although in the majority of cases the behavior of the patient is as perfect as with the latter, there remain a considerable number in which struggling at the beginning and rigidity throughout are so marked as to offset the advantages. Robust patients, alcoholics and those of extremely sensitive nervous systems we have found are bad, sometimes impossible subjects. Because it raises the blood-pressure, we have not given it to patients where this was very high—say above 160—or where there was marked arteriosclerosis. We have not used it much with children under 15, though we have had no reason for not doing so.

Nitrous oxid-oxygen receives its most severe test in abdominal operations where relaxation is so essential to good work on the part of the surgeon. It is here especially that we have been very much aided by the use of adjuncts previous to operation. We have used experimentally morphin and atropin, morphin alone, scopolamin-morphin and, more recently, hyoscin and morphin. The last two combinations have served us best. In the

short experience we have had, we have noted no difference between the action of hyoscin-morphin and scopolamin-morphin and the former is more convenient, being in reliable tablet form. Scopolamin-morphin we have used with ether (and previous to this with chloroform) for a number of years and have seen no bad results. We believe that if rightly administered it is not a dangerous agent, but really makes surgical work safer.³ With either of these combinations nitrous oxid-oxygen can be more evenly administered and less of it is required. It is especially useful where there may be struggling or embarrassing rigidity. Our habit is to give hypodermically one-one hundred and fiftieth of a grain of scopolamin (or hyoscin) with one-sixth grain of morphin two hours before operation. The effects are watched and if there is any marked change in pulse and respiration, or the patient becomes very drowsy the dose is not repeated; otherwise, after about an hour a similar amount is given and even a third dose if necessary to produce drowsiness. We do not aim to produce sound sleep. In 288 cases, 15 per cent. received no adjunct, 34 per cent. received one dose, 37 per cent. received two doses. No case of which we have definite record had three. Fourteen per cent. received morphin and atropin.

Before the anesthetic is started a stethoscope is fastened over the apex of the heart with a plaster, and a single tube

3. The precautions in the use of scopolamin-morphin which have been emphasized by myself and others might, in brief, be repeated. It should not be used routinely, but only in selected cases. Old people and children should not receive it. With those markedly cachectic it should be used with caution. I believe it should not be used in emergency work nor outside the hospital, where its administration must be placed in inexperienced hands and the effect upon the patient cannot be closely watched. The anesthetizer should be a capable and experienced man.—R. R. S., Surg., Gynec. and Obst., October, 1908, p. 414.

leads to the ear of the anesthetizer. This enables him to keep in close touch with its action.⁴ The anesthetic is begun by the administration of pure nitrous oxid. This continues, generally speaking, for about forty-five seconds. At the first sign of jactitation (which is usually shown by a slight quivering of the upper eyelid), deep cyanosis or rapid deep breathing, oxygen is slowly added and increased to the point where these symptoms are controlled. These symptoms are the result of an accumulation of carbon dioxid and are to be met by the addition of oxygen. This stage is continued to the point of full anesthesia, which is shown by a lack of lid reflexes and slightly stertorous breathing. The whole process takes from two to three and one-half minutes — sometimes a little longer. Deep anesthesia to the point of marked cyanosis and a dilated pupil we consider a disadvantage. It is usually accompanied by bringing into play all the auxiliary muscles of respiration with consequent rigidity. The operation is then begun and as it proceeds less and less nitrous oxid is necessary and more oxygen is added. The amount given will vary much with different patients and the severity of the traumatism produced by the operator. As a rule men require more than women. Weaker patients take it best, as with other anesthetics. It happens, especially in one's earlier experience, that shortly after the beginning of the anesthetic and when the patient is deeply cyanotic, respiration suddenly ceases. The pulse becomes very slow and if oxygen is not added the heart may stop; this is

4. A record sheet is kept by the anesthetist. We would suggest this as an almost absolute necessity to those who wish to make a close and impartial study of any anesthetic. The sheet records the pulse before and after operation, the behavior of the patient and any unusual occurrence, the nature of the operation, suture material and drainage. Postoperative vomiting is recorded by the anesthetist from the hospital sheets.

death from simple asphyxiation. We have never seen this happen. A few patients have paused in respiration a half minute or more. With increased experience this phenomenon has become less and less frequent; in fact, we almost never see it at the present time. Certain signs teach one the necessity of adding oxygen. There is usually an increase in the pulse-rate; the respiration becomes more rapid, then deeper and more labored. If one is on his guard, cessation may be avoided by the prompt addition of oxygen. If rigidity is marked, oxygen is added (not nitrous oxid); and if this fails ether is added, as will be described. In weakly patients, especially very anemic ones, cyanosis is seldom apparent and the phenomena of an increased rate in pulse and respiration are sometimes lacking. The latter becomes shallower and shallower and is a warning of impending cessation. It is easily met by the addition of oxygen and the exclusion of nitrous oxid.

As above stated, we add ether with patients showing a rigidity embarrassing to the surgeon. At the point where the abdomen is opened and one is walling off the intestines it may be so troublesome as to make this process prolonged and unsatisfactory. If this happens the operator ceases his work and ether is added to the point of complete relaxation. As a rule after the intestines have been well walled off and the real work begun one may resume the nitrous oxid-oxygen alone. We never hesitate, however, in cases where embarrassing rigidity continues, to complete the operation under ether alone. It is merely a matter of judgment as to when the expected advantage of nitrous oxid-oxygen is offset by rigidity and the ensuing embarrassment to the surgeon. Some anesthetizers add, almost as a rule, ether at the point that we have

indicated, and this we would regard as good practice.

We use a Teter apparatus, which conveniently combines nitrous oxid-oxygen and ether by passing them through a warming attachment before they reach the patient and which, with a little experience, can be rapidly manipulated. This apparatus and the replacements are ridiculously expensive and probably some of the cheaper ones are equally as good.

Rebreathing, which has been rather extensively employed elsewhere, with the idea of reducing the amount of gas, we have made use of to a limited extent. This is done by removing the valve from the nitrous oxid bag and from the cone

and inhaler itself, so that the exhaled air passes partially into the bag and partially out through the exhalation valve. This, with the use of adjuncts, has reduced the cost considerably and the results seem to be equally as good.

Experience with this anesthetic means increasing smoothness. To give it well one must be truly interested in his work and must carefully study every phase of it. The skilled anesthetizer learns to regulate the anesthetic to the needs of the operator. He is constantly endeavoring to keep the patient just at the stage which is necessary to satisfactory work on the part of the surgeon.

DISCUSSION

DR. HAWKIN: Can rebreathing be successfully used in tonsil work?

DR. RICHARD R. SMITH: We have not used nitrous oxid-oxygen very much in tonsil work; in fact, in any work about the throat and head. In some subjects that are rather frail it can be employed, but, generally speaking, we have not found it very satisfactory. The anes-

thetic requires the almost constant presence of the cone, and we found they come out from under it so rapidly as to interfere with the operation. I think the same thing would apply when rebreathing is practiced. We have not found it satisfactory, but others may have found it so; I do not know.

ADENECTOMY

C. B. Younger, Chicago (*Journal A. M. A.*, January 13), says that while there is hardly any abnormal condition of childhood that has received as much public attention as adenoids and few, if any, that have given more satisfactory results from operation, he still thinks that there are some cases where the operation has been unnecessarily performed and that there is sometimes a tendency to careless diagnosis of these cases. There are other obstructions of breathing, that will cause the adenoid facies, such as hypertrophic rhinitis, which is quite as prevalent in childhood as at any other time of life. A high arched palate and protruding

front teeth, a very large hypertrophy of the faucial tonsils, or a slight anterior deviation of the spine protruding on the nasopharyngeal space have also been known to cause the symptom-complex of adenoids. Little or no disturbance of nasal breathing may occur from fair-sized adenoid growth in a spacious nasopharynx, and operation may hardly be required. His paper is a plea for such cases as these and for a careful diagnosis of every individual case to determine whether operation is needed. Indiscriminate operation in this class of cases is objectionable, in view of our limited knowledge of the physiology of these tonsillar structures.

PHYSOSTIGMIN COMBINED WITH MORPHIN IN THE TREATMENT OF PAIN FOLLOWING ABDOMINAL OPERATIONS

Preliminary Report*

BENJAMIN R. SCHENCK, A.B., M.D.

Detroit

Concerning most of the points in the treatment of patients who have undergone an abdominal operation, there is, at the present time, a very considerable unanimity of opinion. Such is not the case, however, concerning the administration of analgesics. One finds in the different clinics and in the work of different surgeons marked variations in the treatment of abdominal pain, from which, in some degree, practically all patients suffer.

There can, of course, be no denial of the statement that no drug is as efficacious as morphin for the relief of pain, yet the extent to which it is used following laparotomy differs widely. On the one hand there are surgeons who never employ opium; on the other, those who administer it, almost if not entirely, *ad libitum*. Probably the majority use the drug sparingly, relying on two, or at most three doses during the first twenty-four hours, later substituting codein or heroin.

Were it not for the fact that morphin inhibits peristalsis and thus predisposes to meteorism, and to the additional fact that nausea and vomiting are prolonged when the drug is freely given, it would be universally used in sufficient quantities to insure comfort to the patient. Could we combine with the morphin some drug which would completely antagonize the paralytic effect on the intestine, an ideal analgesic would result. I believe that we

have, to some extent at least, such a drug in the active principle of calabar bean, namely, physostigmin or eserin. That physostigmin completely fulfils the condition is probably not true, but I feel quite sure that combining physostigmin with morphin lessens to a considerable degree the objectionable effects of morphin when used alone.

The hypodermatic administration of eserin for its effect on the intestinal wall is, of course, not new. von Noorden, in 1901, seems to have been the first to recommend it for this purpose. Mozskowicz, Arndt and Maragliano were among the first to use the drug in the treatment of postoperative intestinal paralysis, and its trial in cases of meteorism has become quite general. Its value, once distention has occurred, is questionable, even in proper cases. It is not only valueless, but positively harmful in those instances of ileus due to peritonitis or to mechanical causes.

In 1904 appeared an article by Vogel of Bonn, in which he stated that for three years he had been using eserin as a prophylactic for postoperative distention. He employed doses of 0.0005 gm., three or four times during the first day, giving the initial dose before the patient leaves the operating table. In this country Craig of Boston has given this prophylactic use most careful trial and his three articles on the subject are both thorough and enthusiastic. Elsberg in 1906 and Vine-

* Read at the Forty-Sixth Annual Meeting of the Michigan State Medical Society, Detroit, Sept. 27-28, 1911.

berg in the same year began its prophylactic use at the Mt. Sinai Hospital and the latter reported favorably for both.

Since then physostigmin has been used quite extensively, more, however, after the distention has occurred than as a routine prophylactic. Judging from the literature and from conversations with those who have tried the drug to relieve meteorism, I would say that thus used it has not found very great favor.

It seems to be well established, theoretically at least, that eserine in therapeutic doses produces a stimulating effect on the intestinal musculature. This it probably does in two ways: (1) by depressing the spinal reflex, thus lessening the splanchnic inhibition, and (2) by its selective action on the muscle of the intestine, similar to its action on the ciliary muscle of the eye. Whether this action on the intestine is directly on the muscle fiber or on the nerve terminals is not known and, as Craig says, does not affect our purpose. Medicinal doses affect the circulatory system but little, causing, if anything, a rise of blood-pressure and a slowing of the pulse. It does not affect the respiration and acts as a mild nervous sedative. The sulphate of physostigmin being very deliquescent, the salicylate should always be used.

In doses of one-seventy-fifth grain there is no danger of poisoning. Stevens reports the case of a woman who received by mistake soon after an operation for double pyosalpinx, a hypodermic dose of 2 grains of eserine sulphate. Within two or three minutes the bowels moved profusely and involuntarily. The respirations became shallow and the pulse imperceptible. She remained unconscious for twelve hours but recovered with no ill effects. This in spite of the enormous dose received.

The action of atropin and physostigmin are entirely antagonistic except for the fact that both stimulate intestinal peristalsis. Atropin is, therefore, the antidote in eserine poisoning.

Craig found that after using eserine "morphine was rarely needed or required, except for distinctly extra-abdominal pain, but when so demanded either morphine or codeine can be given with greater freedom, as there is less danger of obnoxious constipation after its use."

Following this hint I had made in 1907 hypodermatic tablets containing one-sixth grain morphine and one-seventy-fifth grain physostigmin. These were used in selected cases for six months with satisfactory results, but the tablets were not properly protected from the light and air and when they turned brown were discarded.

This spring following a conversation on the subject with Dr. E. M. Houghton, of the Research Department of Parke, Davis and Company, similar tablets were prepared, and I have used them in all cases where intestinal rest was not desired and where there was no danger of masking important symptoms. The cases, numbering fifteen, are all comparatively simple ones, as I have been careful not to use the eserine when there was infection, intestinal injury or other complication.

CASE 1.—Mrs. B., hysterectomy for multiple fibroids. Three doses of combination tablet during the first thirty-six hours; one dose of 1 grain of codeine. Pain controlled perfectly. Abdomen flat and soft. Small movement of the bowels on the third day, following simple enema. Salt solution, 1 pint, per rectum. Urine, 600 c.c. during first twenty-four hours.

CASE 2.—L. S., interval appendectomy. One hypodermic of the combination tablet and one of codeine. Expelled gas, sixth hour. Bowels moved well on fourth day after simple enema. Urine, 390 c.c. during first twenty-four hours. Vomited but once on coming out of the anesthetic.

CASE 3.—Mrs. H., hysterectomy for large multiple fibroids. This patient was a Christian Scientist and would not admit that there was any pain. However, one combination tablet and 1 grain of codein were given. Aloes, belladonna and strychnin pill on the third night. Bowels moved well on fourth day. Abdomen flat and soft throughout.

CASE 4.—Mrs. S., amputation of the cervix, repair of the perineum and fixation of the uterus for complete prolapsus. Despite three combination tablets during the first twenty-four hours, suffered considerable pain. There was no distention and gas was expelled after the second dose. Salt solution per rectum twice. Urine, 630 c.c. in the first twenty-four hours. Bowels moved on the fourth day following enema.

CASE 5.—Mrs. B., repair of the perineum by the Anspach method and Coffey operation on the round ligaments. One combination tablet when coming out of ether. Very little pain thereafter. Slight distention on the morning of the second day; relieved by enema. Slight bowel movement with enema on the second day. Aloes, belladonna and strychnin pill on the evening of the fourth day and large movement on the fifth day. Urine, 450 c.c. during the first twenty-four hours.

CASE 6.—Mrs. G., hysterio-salpingo-oöphorectomy for old inflammatory disease. Three combination tablets and two doses of codein were given during the first thirty-six hours. Gas expelled on the evening of the first day. No distention. Enema on the fourth day caused satisfactory movement.

CASE 7.—Mrs. B., double salpingo-oöphorectomy for dense adhesions causing severe dysmenorrhea. Four combination tablets during the first thirty-six hours. These controlled the pain, which was apparently more severe than usual. There was no distention and the bowels moved freely after suppository on the third day.

CASE 8.—Mrs. L., repair of the perineum and Gilliam operation. Two combination tablets and two doses of codein. Abdomen flat and soft. Slight intestinal cramps on the afternoon of the second day. Enema in the evening caused slight movement and gas. No further distress.

CASE 9.—Mrs. B., salpingo-oöphoro-cystectomy for ovarian cyst. One combination tablet. There was no pain after the first six hours.

No distention. Bowels moved on the fourth day without enema.

CASE 10.—Miss C., interval appendectomy. Patient nervous and hypersensitive. Two combination tablets. Gas expelled evening of the first day. There was no distention and no cramps until the fifth day after full diet had been resumed.

CASE 11.—Mrs. E., repair of perineum by the Anspach operation and Coffey operation on the round ligaments. Two combination tablets relieved the pain during the first twenty-four hours. Gas expelled on the second day. No distention. Bowels moved well on the fourth day after a simple enema. Urine, 420 c.c. in the first twenty-four hours.

CASE 12.—Mrs. W., repair of the perineum, Gilliam operation and appendectomy. Three combination tablets in the first twenty-four hours. Abdomen flat and soft. Bowels moved on the fourth day after aloes, belladonna and strychnin pill.

CASE 13.—Mrs. B., abdominal hysterectomy for carcinoma of the cervix. Three combination tablets and one dose of codein in the first twenty-four hours. Gas expelled freely after eight hours. Bowels moved slightly on third day after enema.

CASE 14.—Mrs. D., repair of the perineum and Gilliam operation. Patient was inclined to be hysterical and the combination tablets did not appear to relieve the pain. However, a single hypodermic of plain morphin acted no better. There was no distention. The abdomen remained soft and flat and bowels moved on the fourth day without enema.

CASE 15.—Mrs. S., hysterectomy for carcinoma of the fundus uteri. Three combination tablets relieved the pain perfectly. Gas was expelled in sixteen hours and the bowels moved well on the fourth day. Salt solution, 1 pint, per rectum. Urine, 480 c.c. in first twenty-four hours.

Since using this combination tablet I have not had an instance of distention even in the slightest degree, except in cases in which but one dose was given. In this case the distention was very moderate and was readily relieved by a simple enema.

The use of laxatives, other than a very mild pill on the fourth or fifth day, has

been discontinued and I am certain that the patients have suffered less than formerly. There is no longer the discomfort of the dreaded "third day." The nurses whom I have questioned in every case have said that the tablet has relieved pain as well as plain morphin and have been impressed by the absence of intestinal cramps.

There is nothing original in this treatment, except the combination of the morphin and physostigmin in one tablet. The cases are too few in number to warrant any general conclusions, beyond the point that thus far these tablets have given excellent satisfaction and deserve an extended trial.

32 Adams Avenue, W.

DISCUSSION

DR. W. P. MANTON, Detroit: I have listened to Dr. Schenck's paper with a good deal of interest, and I have used more or less extensively both morphin and physostigmin, but not the combination in the way he describes. It seems to me that in this present day and generation the use of morphin should be very largely done away with. If we prepare our patients properly for an abdominal operation, which, of course, is possible only when we have a patient in time to prepare it, it seems to me that we should have little or no abdominal distention from accumulation of gases. For probably more than twenty years I was in the habit of giving laxatives and cathartics the night before abdominal section, and during all that time I had frequent cases of abdominal distention, sometimes extreme distention. I recall one case where there was no ileus, no adhesions, no trouble as far as the intestine itself was concerned, the condition being purely a nervous phenomena, and yet it took a week to get that woman's abdomen flat. For the last few years—six or eight years—I have given up entirely the use of laxatives before abdominal operations, and as a result I have rarely had a case of extreme distention. In certain cases I have employed physostigmin in a majority of instances with good results, but I have never given it in large doses. I find that if it is possible to do an abdominal operation with little handling of the bowels and with a small incision the patient has comparatively little after-suffering. For a number of years, possibly twenty years, instead of morphin, I have used codein phosphate almost ad libitum, and I find that the small amount of pain and irritation resulting from the inflammation about the incision in healing are controlled by the codein as well as the nervous symptoms, so that nowadays I very rarely give a dose of morphin. Now I use morphin in a routine

way only in operations on hemorrhoidal tumors and rectal disorders. I have no doubt at all that the combination of morphin and physostigmin is a good one if morphin must be used in these abdominal cases, but I think that morphin can, in a majority of instances, be omitted. At Harper Hospital, if I happen to have an excited, noisy patient who disturbs others, I give morphin to quiet. I had a patient there recently who did not like the food and threw it on the floor. In order to make her feel more comfortable I gave her a dose of morphin, with good results.

DR. JOHN E. BELL, Detroit: I would like to ask Dr. Schenck to tell us whether or not his use of the physostigmin and morphin has relieved the tendency to nausea which is so distressing after using morphin alone. I have used phosphate of codeia, spoken of by Dr. Manton, for some years, and it has been my experience that not infrequently, although I have given 2- and 2½-grain doses, I have still been forced to resort to morphin to relieve pain.

DR. E. M. HOUGHTON, Detroit: It is with considerable interest that I remember Dr. Schenck's use of a combination of physostigmin and morphin for after-abdominal operations. It is recognized that morphin is the drug par excellence for controlling pain. It is open to the objection that whether given internally or subcutaneously it is excreted back into the bowel in a few minutes and a lessened peristalsis results in the same way as when the drug is directly applied to the walls of the intestine or when the nerves are cut. Morphin controls the pain largely because of the central action of the drug, and it seems to me that Dr. Schenck's idea that it would be wise to use physostigmin in combination with morphin rests on a pretty good basis. In physostigmin you have something that stimulates

the muscle in the wall of the intestine to contract. A good many experiments have been made to show whether physostigmin acts on the muscle fibers or on the nervous mechanism in the muscles, but so far no one has been able to pin the matter down exactly. It would seem that physostigmin throws off the brake, as it were, that is put on by the morphin, and allows the intestine to resume its normal function in these cases.

The point raised is an extremely interesting one, and I believe one well worthy of some careful experimentation at the bedside, as well as in the laboratory. So far as I am aware, no one has carried out any laboratory experiments to show just how the two drugs interact.

DR. RICHARD SMITH, Grand Rapids: I believe Dr. Schenck's paper contains a valuable suggestion and I am going to try it. I think, however, that we should put this drug, or any treatment for postoperative pain, in its proper place. For years we talked about the "treatment" of postoperative vomiting, and all kinds of things were suggested for the relief of this very distressing symptom, but no real progress was ever made until we began to withdraw the anesthetic. The treatment of postoperative vomiting is on the table—I mean the giving of just as little anesthetic as is consistent with good work on the part of the surgeon. So it is with these matters of postoperative pain, postoperative ileus, postoperative distention. The treatment takes place on the table and means a brief and gentle manipulation. When surgeons everywhere work with this clearly in view real progress in this matter of postoperative pain will be made. Of course, there are many cases in which more or less roughness is perhaps necessary—considerable traumatism on account of the pathologic condition to be dealt with—but one must ever bear in mind that this is the exception and not the

rule. Personally, I have given up the use of morphin almost entirely after operation and rely, as Dr. Manton has, on codein, and with very excellent results.

DR. SCHENCK, Detroit (closing): I quite agree with what the chairman of the section has said, that the cause of postoperative distention and postoperative discomfort is not to be sought in how you prepare the patient or how you treat her afterward, but how you treat her on the table; but even though you treat her with the greatest respect, she is going to have some discomfort. I am not speaking entirely of abdominal pain, but of backache and all other pains which are suffered by patients who have undergone laparotomies. I agree with everything Dr. Manton has said; in fact, no one has been more afraid of morphin after operation than I have. I have not used it for five or six years, other than possibly one dose in the first twenty-four hours, and then only one-eighth or one-tenth of a grain. Codein is not so good an analgesic as morphin. You can give it in grain doses, but it does not relieve the pain like morphin. If we have something that will take away a large part of the objection to morphin, and it will still relieve the pain as well as plain morphin, it is possible that we have something that can be used more or less routinely, just as we use atropin in tablets.

Regarding the nausea, although I have given three- or four-sixths of morphin combined with physostigmin the first twenty-four hours, I certainly think the nausea has not been any greater, but perhaps less than previously.

There are, however, so many factors which enter into a consideration of this kind that it is difficult to come to definite conclusions. This report is merely a preliminary one. The tablets must be used in many more cases before we shall know their exact value.

Pernicious Anemia Causing Spinal Cord Changes and a Mental State Resembling Paresis

Carl D. Camp, Ann Arbor, Mich., details a case in which changes in the mental state and temper and a spastic and ataxic gait were coincident with lessened hemoglobin and increased leukocytosis. There were no evidences of true ataxia. The examinations pointed to lesions in the posterior and lateral columns of the cord.

It has been shown that pernicious anemia may cause changes in the central nervous system. In these cases there are delusions, mental exaltation, and grandiose ideas. The mental state closely resembles that of paresis.—*Medical Record*, Jan. 27, 1912.

COLOPTOTIC CONSTIPATION*

LOUIS J. HIRSCHMAN, M.D.

Detroit

In dealing with the subject of constipation one enters a field so vast that in order to do justice to the subject one can hope to cover but a small fraction of the classes of cases in which constipation is the principal symptom. One writer has stated that 50 per cent. of all men and 100 per cent. of the women are constipated. While this is undoubtedly an exaggeration and a calumny on the race, nevertheless the number of patients suffering from constipation of some form or other is so large as to make it by far the most prevalent of pathologic conditions.

When one looks at constipation in its broadest meaning, that of pathologic interference with the regularity and amount of intestinal excretion, then one must immediately divide the disease into two great classes—the one class being due to a lack of functional activity—due to dietetic error, improper habit, neural or trophic influences. The other class, which some of us have been pleased to designate as obstipation, includes all cases whose impaired activity is due to mechanical interference with the normal peristaltic movements and expulsive function of the bowel.

I intend to devote myself to a brief discussion of the second class, that of obstipation or obstructive or mechanical constipation, especially in its relation to enteroptosis.

Mechanical or obstructive constipation may be caused by: (1) the presence of

any foreign body, occlusion, contracture, spasm, local lesion, hypertrophy or accumulation in the intestinal canal; (2) displacements, acute angulations, distentions, neoplasms, adhesions or compressions of the bowel; (3) developmental defects and congenital deviations from the normal.

In the first class may be mentioned the presence of any swallowed object which has become lodged in some portion of the intestinal tract, fecal impaction, enteroliths, concretions, stricture, hypertrophied valves or O'Biern's sphincter, hypertrophied sphincter ani, fissure, ulcer, acute angulations of any of the normal fixed points of the colon, stenosis of the ileocecal valve, invaginations or prolapse.

In the second class should be placed ptosis of the cecum, sigmoid, or any other portion of the colon, acute angulation of the sigmoid on the rectum, or at any of the fixed points of the colon, dilatation of the colon (congenital or acquired), carcinoma, hemorrhoids and polypi, pelvic or abdominal adhesions, lacerated perineum, rectocele, malformations of the bony pelvis, including ankylosis of the coccyx.

In the third class should be included congenital absence of the anus, anal canal or rectum, as well as any other anomaly which is congenital in origin.

While I well realize that the above classification is far from complete and satisfactory, nevertheless it will serve our purpose in connection with the discussion of the treatment of the various conditions which are responsible for obstipation or mechanical constipation. To attempt to go into a detailed discussion of the oper-

* Read at the Forty-Sixth Annual Meeting of the Michigan State Medical Society, Detroit, Sept. 27-28, 1911.

ative technic for the relief of all of the conditions which are responsible for mechanical obstruction of the normal fecal current would require several volumes. I therefore propose to rest satisfied with the mere mention of many of those conditions whose treatment is obvious, such as local rectal diseases, the presence of foreign bodies, strictures, impactions, etc., and limit myself to a discussion of that common form of obstipation which is occupying so much attention in the minds of internists, gynecologists and general surgeons, as well as proctologists—so-called constipation due to enteroptosis.

I firmly believe that next to the examination of the colon by means of percussion and sigmoidoscopy, the greatest advance in diagnostic work was made when the radiographer entered this field. Our whole conception of the etiology and treatment of constipation, particularly in the female, has undergone a complete change. It has certainly opened a field for surgical cure whose possibilities are only limited by the ability of the surgeon to carry out the indicated measures for relief.

It is a far cry from the simplest surgical procedure for the treatment of constipation, namely, divulsion of the sphincter, to the extirpation of the entire colon, the extreme measure advocated by Lane. But between these two procedures lie many middle ground operative measures which have proved entirely successful in the permanent cure of mechanical constipation.

Radiographic studies have shown us that many patients with supposedly ptotic colons are not troubled with constipation, and that many constipated individuals do not have ptotic colons. In the latter class, however, the cause is usually found in the rectum and the treatment is corre-

spondingly easy. In those patients in whom the *x*-ray shows marked coloptosis, but whose defecations are normal, we know that the musculature of the bowel is sufficiently powerful to overcome the mechanical displacement.

It is in those cases, however, where ptosis is accompanied by atony, adhesions, or other interference with the peristaltic motion that the displacement becomes an all-important factor.

Ptosis of the cecum is rather more common than we formerly thought. It is surprising how often the cecum, overloaded and distended, is found low in the pelvis rotated, and often adherent there. Many constipated cases who have had sensitiveness in the right iliac region have been operated for chronic appendicitis and after the operation have had the same old symptoms. A second operation in some of these cases has revealed the presence either of a ptotic cecum or stenosis of the ileocecal valve, which conditions, when corrected, either by anchoring of the cecum to the posterior or lateral abdominal wall, or ileocecoplasty, has given the patient complete relief.

When one considers the location of the cecum, how it forms an elongated pouch below the ileocecal juncture, it is not surprising that it very often becomes a cesspool from which absorption takes place readily and which becomes distended, elongated, prolapsed and rotated by the weight which its overloaded condition creates.

The ascending colon rarely gives any trouble, but the hepatic flexure is often accentuated by the drag of an overloaded cecum and transverse colon, and occasionally becomes occluded or partially so by adhesions caused by the extension of hepatic or gall-bladder diseases. The transverse colon may prolapse so far that it rests beneath the pubes, but if it is not

adherent or imprisoned it may empty itself in some instances and not be considered abnormal. In many cases, however, radiography of the part with the patient in the Trendelenburg position has shown us that the bowel is firmly held in the pelvis by adhesions, and does not rise out when the patient is in the recumbent position, it being well known that there is a motility of 4 or 5 inches in normal individuals. The normal angulation of the splenic flexure becomes acutely exaggerated from the drag of an overloaded sigmoid added to that of the transverse colon. It is in the sigmoid flexure, however, where a great many of our worst cases of constipation find their expression. The sigmoidal loops become greatly enlarged and occupy the right side of the pelvis in many instances; not infrequently the sigmoid overlies the cecum and had been found in some of my cases to be adherent to it. Ptosis of the sigmoid, with its accompanying acute angulation of the rectosigmoidal juncture, as well as invagination, are responsible for a larger percentage of coloptotic constipation than any other one factor.

In the treatment of constipation due to coloptosis, the disappointing results following the immobile fixation of the various portions of the colon to the abdominal wall have been caused by the fact that the large areas of adhesion necessary for fixation have seriously interfered with the contraction of the muscular fibers of the colon and have accentuated, instead of relieving, the atony already present. It is one thing to put a bowel in its normal geographical location, but another thing to make it work after it is put there. The extirpation of the colon, as advocated by Lane, and by him only in extreme cases, by its terrible mortality is almost prohibitive in those cases where it might seem indicated. Large lateral

anastomoses between adjacent dependent limbs of the colon, combined with plication or tucking in of the elongated mesentery, to my mind is the indicated procedure in many coloptotic cases.

Where one is able to remedy defects in the position of an organ by using its natural support for the correction of the abnormality it is far better for the future functional result than to cause the formation of adhesions in an unnatural site. In ptosis or invagination of the sigmoid, as I have pointed out in previous communications to the American Proctologic Society and the American Medical Association, the natural position of the sigmoid can best be restored by shortening the mesosigmoid. This brings the sigmoid back into its natural position without causing any adhesion to the parietal peritoneal walls, and there is no chance of forming any new angulations such as have been known to follow the operation of colopexy. Mesosigmoidopexy should be the operation of choice in those cases of sigmoidal ptosis which cause the constipation in women following hysterectomy.

It is obvious that in those cases of constipation in patients giving a history of previous peritoneal inflammation or abdominal operation, where radiography shows the colon bound down by adhesions, that the liberation of these adhesions and replacement of the colon is the logical surgical procedure. In the prevention of the reformation of adhesions the covering of the surfaces with aristol, Cargile membrane, sterile oil or fat, the frequent changing of the patient's position and the subcutaneous use of physostigmin are all measures which have their value. The administration of enemas just before operation and the use of alum enemas afterward are also of considerable value as a prophylactic against new adhesions. It must be confessed, however, that an ideal

method for the prevention of postoperative adhesions is still to be discovered in the future. In those cases where adhesions persist in reforming in spite of one's best endeavors, the operation of ileo-sigmoidostomy may become necessary. This has been found by some surgeons to be unsatisfactory on account of the liquid character and frequency of the subsequent evacuations, but in the author's hands has been very efficacious. This annoyance can be avoided, however, by bringing the ptotic transverse colon across and making a lateral anastomosis with the sigmoid flexure, using the most dependent portion of the transverse colon for the purpose.

Some cases of ptosis and distention of the sigmoid and more rarely the transverse and ascending colon are secondary to obstipation caused by mechanical obstruction in the rectal region. The principal causes here being hypertrophied rectal valves, acute angulation of recto-sigmoidal juncture, or prolapse of the anus, rectum or sigmoid. The local relief of these conditions by valvotomy, mesosigmoidopexy or excision of prolapsed mucous membrane followed by daily rec-

tal and sigmoidal massage by means of the author's pneumatic rectal massage bag will give prompt and lasting relief.

Before closing I wish to show a few lantern slides which will demonstrate the necessity of checking up the clinical diagnosis by means of radiographs of the colon. Whether the patient gives a history of previous pelvic disease or laparotomy or not, I am convinced that the radiograph is an indispensable diagnostic aid.

In conclusion I would urge that in all cases of constipation whether the radiograph shows them to be coloptotic or not, one should give the patient the benefit of the doubt and use every approved method of treatment, whether dietary, physical, mechanical or medicinal, before resorting to surgery for its relief. When other methods have failed and the case proves to be coloptotic constipation, then, whether the operation be a mesenteric suspension, a plication or an anastomosis, the use of mechanical measures as well as the outlining of a proper dietary and a regulation of the patient's habits should constitute just as important an element in the treatment of the case as the operation.

604 Washington Arcade.

DISCUSSION

DR. P. M. HICKEY, Detroit: I am very much interested in this work which Dr. Hirschman has put out in the diagnosis of these malpositions of the colon and the consequent trouble. From the fact, however, that about every fifth individual is born with a ptosis, it seems to me that our treatment should begin very early. I think the schools should take up the matter of correct position. Pupils should not be allowed to go around with the shoulder blades prominent and shoulders forward and the abdomen totally limp, but they should be taught the military exercises, and setting-up drill to bring them up in shape and accentuate the development of the abdominal muscles, and then this condition would not be present in the later life and there would not be as many neurasthenics.

DR. SAMUEL G. GANT, New York: For years I have called attention to the frequency of mechanical constipation and the good results attainable by surgery in these cases. There are three distinct types of constipation: the *atonic*, *spastic* and *mechanical*. The *first* is improved by general and local therapeutic measures which will strengthen the intestinal musculature. The *second*, due to enterospasm by the application of heat and the administration of belladonna alone or in combination with opium which favor relaxation of the bowel, and the *third* or mechanical constipation can be overcome by correcting an invagination, twist or ptosis of the gut or by removing a tumor, breaking up adhesions or by taking care of any lesion which interrupts peristalsis or blocks the intestine.

I have performed colopexy and sigmoidopexy about 200 times, and the operation has been successful in more than 80 per cent. of the cases. In some instances constipation immediately ceased, but in others physical measures were necessary following operation to tone up the partially paralyzed bowel. Post-operative complications have not arisen except in one or two cases, and in my hands anchoring of the bowel to the abdominal wall has given better results than shortening of the mesentery advocated by Dr. Hirschman. Our difficulty in this class of cases is the colitis, which nearly always complicates them and which requires simultaneous treatment.

I have not time to discuss valvotomy or Lane's excision of the colon, procedures which give good results in properly selected cases. Divulsion of the sphincter for the relief of constipation is justifiable when it is tightly contracted or the patient has fissure, but does no good and much harm under other circumstances and should be condemned as a routine measure.

Many patients suffer from pseudocostiveness and believe they are constipated simply because the fecal bolus is not exactly right in color, shape, consistence or size. Such individuals must be taught that the amount and color of feces voided varies according to the quantity and quality of food consumed and practical suggestions should be made which would help to overcome their abnormal mental state.

I desire to thank Dr. Hirschman for presenting this timely subject in such a concise and practical manner.

DR. MERRIMAN: In addition to what Dr. Hickey has said regarding teaching children to do something besides arithmetic, I believe that one of the ways to stimulate a normal contraction of the abdominal wall is, for instance, instead of stuffing in to their heads all that is in their books, to have them carry a book, or something else, on top of their head. That brings the abdominal wall into action, straightens up their body and assists in bracing the colon and cecum. Where I treat obstinate cases, I find that giving large amounts of

water just shortly before eating, and obliging them to eat slowly and, where that does not relieve them, to give them a certain amount of massage, seems to give my patients the best results.

DR. L. J. HIRSCHMAN (closing): I want to express my acknowledgment to Dr. Hickey for his excellent work in making those plates for me, and will attempt to answer the questions as asked.

The way we have been injecting the bismuth is by putting the patient in the knee-chest position and giving the bismuth by enema, using bismuth and water, and it goes up into the cecum inside of five, six or eight minutes without any trouble. After the knee-chest position, have the patient lie on his left side, abdomen, right side, and then sit up, and you can feel the gurgling of the water as it goes up. There is no need of attempting to give the so-called high enema—there is no such a thing. Put your enema tube inside of the sphincter, and it will be carried up in a few minutes.

I think Dr. Gant touches the keynote of the paper in emphasizing the statement, which I was careful to emphasize, that it is coloptosis plus the atony which is responsible for these so-called coloptotic constipation cases. I have known patients to have coloptosis and no constipation, and also patients with constipation and no coloptosis, but where you get coloptosis plus atony you have got to cure the coloptosis before you can the atony. You have got to keep up the dietetic, physical, mechanical, psychical and all other methods in order to carry on the work you have just started by your operation. We should use the *x*-ray as a diagnostic measure, and should not be led astray by what we find, but follow the different conditions we have, but where we have coloptosis we should be sure that *that* is the factor. Where we find the ptotic colon there are other things to be considered. We usually find that there must be *atony present plus ptosis* in order to get constipation, and the relief is not always surgical; but when we do find a condition that needs surgical relief we must go right at it and not fool with drugs or cathartics or anything else.

FEVER OF THE NEW-BORN*

EUGENE BOISE, M.D.
Grand Rapids, Mich.

Mrs. W. went to the maternity cottage of Butterworth Hospital at about 8:30 a. m., July 3, 1911. She was apparently in perfect health. Her temperature on arrival was 98.8°. The kidneys were acting normally and examination of the urine showed it to be free from albumen. She was delivered at about 4 p. m. of the same day of a baby well formed and apparently perfectly normal in every respect. The labor, while severe, was normal, without forceps. Two hours after delivery the mother's temperature was 100.6° and the baby's 100.4°. From this time the mother's temperature gradually fell so that twelve hours after delivery it was 98.4°. But the baby's temperature gradually rose. At twenty-four hours after delivery it was 101.8°. At thirty-six hours it was 102.4°. Baths were then given and the temperature fell to 101.2°, forty-eight hours after delivery, but on withholding the baths the temperature rose, so that sixty hours after delivery it was 104°. From this time it gradually fell. At three days after delivery it was only 98.8° and soon reached normal.

This represents the most benign type of fever of the new-born.

There is another type that begins later—is more prolonged, and much more serious, inasmuch as it is an expression of a septic condition. From a pathologic standpoint this may be divided into two classes; first, where the child is septic when born, because of a septic condition of the mother's blood; and, second, where the child becomes septic from absorption through some unprotected channel—in the great majority of cases, through the umbilicus.

In a discussion of these fevers of the new-born, two questions suggest themselves: first, what is their cause, and second, can anything be done to prevent them? And these lead naturally to an inquiry as to what fever is, how it is produced and what is its significance.

Krehl says:

Fever is characterized by an increase in the temperature of the body, and by certain changes in the metabolic processes. . . . An increased production of heat within the body through excessive chemical decomposition, may cause a rise in temperature. Therefore muscular exertion, which causes such chemical decomposition, even if not severe, may raise the temperature of the body.

In fever there is generally a disproportion in the ratio of heat production and heat loss, but (as Krehl says) "normally the body can dispose of much larger amounts of heat than are liberated within it during fever. So that the cause of the high temperature in fever cannot be an increased production of heat alone." There is, in a normal individual, a heat-regulating mechanism which controls or coordinates the heat production and the heat loss, and it would seem probable that in fever this nervous mechanism is disturbed or diseased, so that while there is an increased production of heat, there is, at the same time a decrease in the heat loss, so that the characteristic high temperature of fever results.

"Fever may be produced by various causes, chief among which is the entrance into the blood of living or dead bacteria or of their products, yet the mere presence

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of microorganisms in the circulation does not necessarily raise the temperature of the body." For instance, an animal may die from an infection and its heat production may be markedly increased, and yet, on account of the corresponding increase in heat loss, there may be no rise of temperature. . . . Though bacteria and bacterial products are undoubtedly the most important causes of fever, they are not the only ones. Fever may be produced by the destruction of larger numbers of cells in the body, even though microorganisms play no part in the destructive processes. For instance, the fever that so often follows simple fractures or large interstitial hemorrhages, or severe and prolonged muscular exertion. Krehl raises the question whether it is not possible that a single chemical substance or class of substances is the cause of all fevers.

Some have thought (incorrectly) that the fibrin-ferment might play such a rôle. At any rate, the proteid decomposition during fevers pursues a peculiar course, and the hypothesis that the products of this abnormal decomposition directly cause the fever is an exceedingly attractive one.

In the case quoted at the beginning of this paper, in seeking for the cause of the fever which manifested itself at or soon after birth, sepsis must be excluded. The mother was in perfect health. The child was normal, the placenta showed no signs of disease, and the cord was free from all signs of infection. Moreover, the onset of the fever, practically at birth, and the short duration, precluded the possibility of sepsis. Nor could there be any gastrointestinal fermentation before birth. But, inasmuch as muscular exertion is a well-recognized cause of increased temperature through induction of chemical or metabolic changes, it is more than probable

that the fever which manifested itself so early was due to the mother's blood, contaminated as it was by the products of severe muscular exertion, acting on the heat-regulating center of the child. The fever thus produced was interesting from a clinical point of view, but yielded readily to elimination and to the antitoxic power of the normal blood.

But the septic fever of the new-born caused by infection of the cord or at the umbilicus is much more serious. It is not infrequent but is often unrecognized.

Williams says:

It may be stated, as a general rule, that whenever children die, without any appreciable cause within a few weeks after birth, such an infection should be suspected.

There are various views as to the pathology and history of the disease, as also as to its frequency. For instance, Dickinson says that the ratio of septic deaths to early deaths from all causes varies between 15 and 40 per cent.

Hirschfeld says that in sixty autopsies with septic infection emanating from the navel, he found arteritis alone thirty-two times, phlebitis eleven times. The two together three times and venous thrombi four times. He thinks the umbilical vein the "port of entry" of the virus.

Runge states that the lymphatics are the path of infection. He does not think it possible to diagnose arteritis during life.

Furth saw, in four years, 308 cases of arteritis umbilicalis of which fifty-eight died. It never occurred before the separation of the cord. He says nearly all the authorities regard the processes as beginning in the perivascular tissue.

The causes of phlebitis are the same as those of arteritis. The disease may be consecutive to inflammation of perivascular tissue.

In contradistinction from arteritis, sepsis and pyemia readily occur. It also

occurs after separation of the cord. Recovery occurs in the mildest cases only.

Miller reports (in 1888) that in Moscow Foundling Asylum, with the best precautions, there are yearly from 500 to 900 deaths from pyemic processes, and that there is hardly any doubt that the preponderating cause is umbilical infection.

Most of the sepsis dates from the first week of life. In cases in which death from sepsis takes place in the first three days of life, the disease must have had a prenatal origin.

Eross says that as a general truth fever is the safest, and often the sole symptom of infection.

Ehrendorfer (1892) says the same.

Ahlfeld (1894) says that asepsis of the umbilical cord is a failure. Suppuration of the umbilical cord cannot be prevented.

Cohn (1896) says that everything in connection with a disturbed healing process is of an infectious nature. The germs may enter by the lymphatics of the newly forming navel, by the glandulæ of the skin or even directly by the open surfaces of the vessels. And yet, as before stated, fever may be the sole symptom of constitutional sepsis, the local condition telling nothing, or indicating a healthy process.

As for treatment, it can, in a general way, be summed up under one word "prophylaxis." After infection has occurred, as evidenced by an unexplained fever, support and elimination are the watchwords, supplemented, if you please, by local wet antiseptic dressings.

In the line of prevention Dickinson quotes a multitude of authorities, with a consequent multitude of dressings.

Fothergill advises wet antiseptic dressings. The American Text Book of Obstetrics (1896) advises antiseptic lotions (1 to 1,000 bichlorid) followed by powdered boric acid and borated gauze.

E. P. Davis says: "Cleanse with bichlorid (1 to 5,000) powder with salicylic acid and starch (1 to 5) and wrap in borated cotton. Dakin (1897) passes the stump through a square of antiseptic gauze and covers it with one or two teaspoonfuls of boric acid powder. On the other hand, Jewett (1899) teaches that after thorough drying, the stump is to be wrapped in absorbent cotton. Powder is to be omitted as it prevents rapid desiccation. After separation the surface is to be kept dry.

Whitridge Williams says:

The stump of the cord should be thickly sprinkled with powdered boric acid and covered with a pad of sterile absorbent cotton, which should be held in place by a flannel bandage pinned tightly about the abdomen. This dressing should not be changed for some days, unless it becomes moist or soiled.

Dickinson has advised the ligation of each vessel separately. He prepares the child as for an operation. A nurse takes the cord with forceps, 6 or 8 inches from the abdomen, and makes gentle traction. The jelly of Wharton is stripped back and the sheath is cut at the cutaneous junction. Each vessel is then ligated and cut. They then retract. The skin rolls in and a dry gauze pad is placed over the wound under a roller. No powder and no antiseptic solution.

All these precautions look toward the prevention of infection, and are generally successful. But if, in spite of our precautions infection occurs, little or nothing can be accomplished by local applications. The harm is done and the struggle becomes one of endurance on the part of the child. Danger of further intoxication from the products of intestinal putrefaction must be guarded against by frequent minute doses of calomel, followed by castor oil, and the antitoxic powers of the system must be conserved and increased

by free feeding and all available means. A serum or vaccine may be of benefit if the infecting germ can be isolated or recognized.

SUMMARY

1. Fever in the new-born, which manifests itself at or immediately after birth, may be: (a) transient and harmless, arising from the irritation of the heat center in the child by the mother's blood rendered temporarily toxic by products of metabolism which are directly caused by the violent muscular action; or (b) it may be septic, due to prenatal sepsis in the mother.

2. Fever coming on at or soon after the separation of the cord is generally septic and depending on infection at the umbilicus.

3. This infection may enter at the open mouths of the vessel, the lymphatics or the perivascular spaces.

4. Fever may be the only symptom of the infection, the umbilicus showing no abnormal sign.

5. The treatment should be instituted immediately after birth and should be directed toward prevention of infection. If fever arises and is persistent, elimination and support are the indications.

DISCUSSION

DR. W. C. MARSH, Albion: A recent case of mine, a child born after a short labor of a perfectly healthy German woman, developed a temperature of $104\frac{1}{2}$ F. twenty-four hours after birth. No cause could be assigned for the high temperature, which in another twenty-four hours had become normal. There was no sepsis, and the mother's temperature did not rise above normal.

DR. H. W. YATES, Detroit: I have one word to say about this paper, since so little is written on the subject. I think the principal thing is to recognize any kind of pathology early and that brings up this point: We should examine the new-born child more frequently and carefully than is generally practiced. With that end in view, I think if a chart is kept for the mother it is only fair that a chart should be kept for the babe, remembering always that the child's temperature is about 1 degree higher than that of the adult. If this is allowed to go on for two or three days until we find the child is seriously ill, and then find that it has a high temperature and is seriously ill, we have gotten by the point where we can be of prophylactic use to the child. Therefore, I

would suggest the use of the chart for the child as well as for the mother. As I understand it, Dr. Boise claims that the principal thing that he aims to do is to obtain a mummification of the cord, and if that is so it seems rational to see the cord first of all as sterile as possible by the ordinary means, and then to do it up with dry powder and dry dressing.

DR. C. S. COPE, Detroit: This is an excellent paper and I am very much interested in it. There is just one thing to use with little children as a preventive of fever, and that is high irrigation of the bowels. The bowels perhaps have closed and something rotten is there that is causing this fever (auto-infection). The bowel is made use of for drainage. Open up this river. Give frequent injections, and when at any time you have little children with fever this will do more for you and has done more in my hands than anything else.

DR. BOISE (closing): I do not know that I have anything more to say. I thank the gentlemen for their kind discussion.

1912 DUES ARE NOW DUE AND SHOULD BE PAID
BEFORE APRIL FIFTEENTH

PUERPERAL INFECTIONS *

A. S. WHEELOCK, M.D.
Goodrich, Mich.

Those who began practice twenty years ago had some vivid impressions that had been drilled into them in college days regarding puerperal infections. We were told of the classical writings of Holmes and Semmelweis and in accordance with those teachings we were cautioned that if we had one case of child-bed fever we must do no obstetric work for many days to come. And while memory lasts we can never forget the deep responsibility that was laid on the doctor who should fail to remove even part of the placenta in every case of delivery either premature or at term. These impressions were deepened by the tragic narratives of the venerable ladies in the communities where we began practice, and when it was so necessary that favorable opinions be formed of us. Then we vowed that no woman in our care should lose her life as did the one perhaps in the hands of our predecessor, because he had left a fragment of a placenta.

It is true that these two decades have wrought many changes in the theories and practice regarding puerperal infection, owing to our knowledge of the various disease germs and the means by which the system resists them.

I believe it is not the fault of medical teachers in our up-to-date medical colleges that so much irrational practice remains but this is a relic of barbarism that is handed on to the young practitioner both

by the laity and by us that are older who ought to have been oslerized ten years ago.

There is one point in the physiology of the puerperal uterus that I wish to recall: There is a leukocytic wall or layer that nature supplies here as in other regions where she wishes to defend and build. This lines the whole uterine cavity and there is a mass of fibrin and clot at the placental site that the examining instrument or finger cannot differentiate from placental tissue. And this if curetted away cannot be named except by the aid of the microscope. Such masses are always formed in the normal uterus and are absorbed or cast off in a physiologic way. This thrombus at the placental site is the means by which those vessels are closed and even if infected is disposed of in a short time in a woman of average resistance.

The bacteria that cause the infective inflammation and exudate here are the same as those that cause infections elsewhere excepting that the colon bacillus and the gonococcus are more frequently the causative factor. There is an occasional case of Klebs-Loeffler bacillus.

The routes of infection are the blood and lymph vessels and not by continuous extension, through the tears of the birth canal, or local foci may arise through multiplication of germs deposited by the blood stream. Old abscesses that have not become sterile may be the cause. That the accoucheur has been at fault is evident by the comparison of statistics before and after rubber gloves and sterile dressings and bedding and surgical cleanliness gen-

* Read at the Forty-Sixth Annual Meeting of the Michigan State Medical Society, Detroit, Sept. 27-28, 1911.

erally were taught. And yet there is still room for improvement for many do not take time necessary to do those things.

There is great immunity against serious systemic infection for it was not uncommon to find at our second visit only a degree of elevation in temperature in the old haphazard days. The pelvic tissues are especially resistant and quickly localize infection because of their bountiful lymph supply. With all possible cleanliness it may be given as a rule that he who makes the fewest examinations introduces the fewest germs.

TREATMENT

We ought to protest in season and out against the general use of the curet where uterine infection is suspected. The amount of tissue removed is no index that it was proper to use it at all. The curet and the uterine douche are still claiming many victims. Should the temperature decline after their use that is neither a proof that the patient is better or that their use has done good. It is not uncommon that a chill comes soon afterward. It may also be worth while in this connection to state that chills, fever and sweat come and go in a most irregular and mysterious way whatever the treatment, or even if no treatment is used. But the curet dislodges the infected thrombi that are lodged in the mouths of the vessels — forces them into the circulation and the blood-vessels opened to absorb more septic material. The removal of a few millions of bacteria from the uterine cavity is of small moment, for enough will be left to cover the favorable surface left by the curet, and are not of the importance of the many millions that are already in the system and multiplying there. It is common enough to require a protest if we recall cases that come to our knowledge when the curet has dug through the soft-

ened uterine wall. I wonder if it was to prevent this that the auger was invented. It is not uncommon to find this form in the obstetric instrument bag when its only proper place is among the curios of the historical museum.

Vaginal and uterine irrigation is to be condemned as useless and dangerous. Of what use could it be to wash away the normal saline solution that nature uses to bathe the uterine and vaginal mucosa? If cervical or perineal tears are infected we cannot avoid carrying the infection higher up by the douche.

As regards the more formidable surgical undertakings to get rid of the infected uterus and thrombosed veins statistics do not favor either. It is true these means have been used in the more serious cases but just as many of the serious cases get well without surgery excepting in the complicating neoplasms. So far then in considering local treatment it is more important to point out what not to do as a routine procedure. Cases where great fetor or hemorrhage indicates that secundines remain after either abortion or at term, and such masses are not easily removed by use of placental forceps, may require tamponage of the uterus with sterile gauge. Regardless of temperature this may have to be repacked after twenty-four hours. Pads moistened with Wright's solution of sodium citrate and sodium chloride should be placed externally to prevent odor and facilitate drainage, and these changed often.

The systemic treatment is most important. Dr. Emil Ries began to teach and practice this more than ten years ago, basing his faith on the statistics of Merman who never even examined a puerperal case unless on account of hemorrhage. Treating the fever as any other fever he had a mortality of less than 1 per cent., when in other large hospitals

the usual mortality was about 4 per cent. My own experience is not extensive enough to be of value to any one else, but in cases of retained secundines after abortion, I have let nature prepare for their easy removal and have had no case in which I regretted this practice. I have drained the culdesac in three but let nature sterilize these unless they point decidedly toward the vagina. There will be a small number that will require surgical attention afterward, but Nature often completely care for the inflammatory exudates.

Dr. T. J. Watkins, of Chicago, has kindly furnished me with the statistics of Wesley and St. Lukes hospitals. He follows what he styles a rational treatment and appropriately so, for he treats them as he would an infection elsewhere. These are severe hospital cases some of whom had had meddlesome surgery as curettage and douches before coming under his care. Six of these ninety cases were suffering

from septic peritonitis and practically moribund when admitted. Three others died, so we might say there was a mortality of less than four per cent. His routine treatment is: first, forced nutrition; second, elimination; third, relief of pain with codein; fourth, fresh air and sun baths as for tuberculosis.

The last ten years has done away with abdominal section in the acute stage of puerperal infection. The next has got to fight its battle against the curette and the douche. We have thought these measures resulted in the decline of fever and the patient's betterment, but those who recovered did so in spite of a treatment that was a damage. Vaccines may do good in chronic cases. Posture for drainage, abundance of water by mouth and proctoclysis for elimination. Concentrated digestable food and hygienic measures to increase systemic resistance will save 98 per cent. of puerperal infections.

DISCUSSION

DR. H. W. YATES, Detroit: This very important paper should not pass without some discussion, I am sure. I am sorry that in the doctor's framing up of this paper he did not lay a clearer outline of the different forms of infection. We have two forms of sepsis, one of which is of the sapremic character and depends on dead tissue for its promulgation and propagation; therefore, this variety depends on retained portions of the placenta, blood-clot, etc. The other type is that of the pathogenic organism, such as the streptococcus, staphylococcus colon bacillus and gonococcus, and their frequency is found in just the order I have mentioned. Now, as to saying that the curette has no place, or that the finger in the uterus has no place in forms of sepsis, is rather a broad statement. If we have retained placenta or secundines, sufficient dilatation is necessary to remove these secundines either by the forceps, as the doctor has said, or by the finger, which is very much more preferable, or by a dull curette. If, on the other hand, we have this other form of sepsis, no instrumentation should be permissible under any cir-

cumstances that I can recall now; that is, early. That brings us up to this point; we must make a diagnosis of which of these forms we have. True, occasionally we have a mixed form of infection, but as a rule one or the other predominate very markedly, and if we have a sapremia, with a high temperature, sweat and all that sort of thing which characterizes sapremia, with a sudden rise of temperature and a pulse which does not speak of streptococcus, that uterus should be explored carefully with all the precaution that belongs to any surgical operation. There is a clinical entity which is very pronounced in these two forms as well. We find that people suffering from a sapremia do not show that sickness nor shock; they are not so disturbed; their pulse-rate is not so disturbed as it is with the staphylococcic or streptococcic infection. A person will have a high temperature with sapremia, and in twenty-four hours after the cause is removed they will feel as well as ever. It is not so with the other form of sepsis. Therefore we should make our diagnosis early by smear and by clinical signs as to what form we have.

Having determined that, then we should treat it accordingly. I think the doctor's paper has well brought out this one principle: that the sooner we learn that we have a serious infection of micro-organism of the pathogenic type—streptococcus, staphylococcus and colon bacillus—the sooner we learn this the better, and the longer we keep out of such a uterus the better.

DR. C. S. COPE, Detroit: I gave a little of my views this morning, but I really think that the physicians of later years have been governed by names rather more than conditions. As I said, in the early part of my practice, and I have associated with my father and other physicians in large practice, I do not recall a single case of death from sepsis, and, as I said this morning, for sixteen years I took care of women in confinement and never washed my hands until after I got through. About twenty years ago they began to talk about using the douche and the curet, and, bless my soul, we began to have those cases, and where I could have a nurse and the nicest conditions possible and every precaution taken. I can recall the most heart-breaking case where the woman died in spite of everything we could do, and at the same time I would be taking care of cases where they were poor and neglected and the common comforts of life not present. I remember one woman who gave birth to a child, and the baby was, they said, crooked, and they had a midwife there two or three days, and she was dirty, inconceivably so, almost. The after-birth was retained, they could not get it away, and asked what I would charge for coming. I went there and found an hour-glass contraction. This was about forty-eight hours after that woman had manipulated the parts and bruised them. There was no special laceration, but the woman was in a bad condition. She was covered with a dirty horse-blanket that had been lying on an old couch in a stable, and I delivered that woman of her placenta and she made an uneventful recovery. How do you account for it? There must be something to it we do not yet understand. We have been scared with this cellular pathology, and we come up to the cellular pathology and there we stop. Cellular physiology is the thing we want to consider. Go a step further. Do not be scared and say this, thus and so. I would not have you understand for a minute that I do not take every aseptic precaution. I do everything I can for the benefit of my patient as science dictates

now, but I think we have gone too far in those cases. Case after case comes and goes; the case apparently neglected and the case that you would think should have infection has come out all right, whereas those where you took every possible precaution becomes infected. Where do you get it? It must be something in the patient, because, as I said before, if we tested each expectant mother first it would be better. Ask for the urine and test for indican. It is its presence there which indicates faulty metabolism, which I think leaves the door open for infection to follow. See that the body is put on its best basis; see that the metabolism is good, so that the phagocytes can eat up all that comes to that case, and the woman will be on the defensive and not suffer from the pains and penalties which follow.

DR. F. L. TUPPER, Flint: About the first question asked of a physician after he has attended a case of obstetrics or miscarriage is, Doctor, did you get all of the after-birth? So oftentimes the uterus is cleaned out to satisfy the laity and prove to them that nothing has been left behind to cause the much-dreaded blood-poisoning. I firmly agree with Dr. Wheelock that the less you examine and do at this time, the better it is for the patient. I think the proudest moment of my life was after I had performed my first curettage. I did not know just what I was doing, and fortunately for all parties concerned, the patient got well, but it was more by good luck than good management.

DR. ROLLAND PARMETER, Detroit: I cannot miss my opportunity to add my mite of praise in behalf of this most excellent paper. Such sane and sensible things and said in such a way, coming from a general practitioner, shows that after all the average practitioner of to-day is fully abreast of the times. He keeps in touch with medical matters and is not led astray by glittering generalities. Such a paper as that just read deserves the highest commendation.

DR. ROBB: I have passed the age of 64 years, and I want to say to you that this is the first really good paper I have heard on this subject since I have been practicing medicine. I tell you we have had too much midwifery all the way through. Nature is the best physician we have, and she has no superior. I have had the strongest fight in my life to let douches and things which have been marketed in the last twenty-five years alone. I know that I have attended over 1,000 confinements during that

time. I never have worn a glove and have been particularly careful about keeping clean. I have no use for meddling midwives. I never used instruments unless absolutely necessary, and I can look over my work of forty-five years and count but four deaths during that time, and I believe it has been simply from the fact that I have not been meddling, but I have been careful, and as I say, I want to say "Hallelujah! Thank God, we have got somebody who is on the right road."

DR. A. L. SEELEY, Mayville: Possibly I have found my ways from a different field of practice. The people who live in sanitary surroundings do not have to learn how to resist those germs. Probably the people in the country have a higher resistance.

DR. REYCROFT: From all this talk it would seem that the infection comes from the outside, either from the intra-uterine cavity into the vagina or from some infection from the obstetrician, but I remember one case I would like to mention, and that is one I believe had a ruptured pus-tube during confinement. I believe we have many cases that come along after confinement or miscarriage, that do not come from intra-uterine trouble. These come from extra-uterine—from pus-tubes. Those cases, however, you might probably differentiate from the others from the quickness with which they result, and the very great distention following immediately after confinement.

As far as taking care of the case after confinement or miscarriage is concerned, you remember, probably all of you, twenty years ago we used to use bichlorid of mercury injected vaginally, and probably caused some trouble. To show you how quickly the absorption goes along that channel, I remember some ten years ago I knew considerable about adrenalin. Two cases came nearly together, and there had been a dangerous hemorrhage. I thought now this new remedy would probably prevent this hemorrhage that the other doctors had failed to check, and I would get a long syringe and when this hemorrhage began I would carry it into the uterine cavity and inject a little adrenalin, which I did. The first case did not seem to do well. It checked the hemorrhage, but I nearly lost my case. I could not see what did it. The next case that came along I did the same thing. I could not see the danger of using a drachm. I used it intra-uterinely. I could not see how we could get any trouble from it, but I remained all night and pretty near all the next forenoon before I

could go home, because the patient had no pulse and we were alarmed. That shows you how dangerous it is to use any medicine intra-uterinely. We do not use it any more intra-uterinely. We hardly use anything. It is wonderful how we do find people who get through who are living in filth, and in many cases we admit this, but it is no reason why we should not be as clean as we can be on every occasion. I am glad to have heard the discussion and wish to compliment the doctor. I think we should in every case we attend of confinement be cleansed as though we were going to operate.

DR. R. R. SMITH, Grand Rapids: I want to add a word of commendation of Dr. Wheelock's paper, and endorse his sentiments. I think this is the attitude we should all hold toward this matter of puerperal infection; that is, the attitude of non-interference. The cases that have retained secundies resulting in infection are few, and after one is reasonably sure that such a condition does not exist (a thing which is very easily found out), the policy should be to let the uterus strictly alone and we should depend on feeding, sleep and good care. I am very glad indeed to see that he called attention to the necessity of sunlight. Where a patient is in for a long siege it is of importance I think to see that they are moved to a room where they can have plenty of fresh air and sunlight. I believe these things will go a long ways. In other words, use all the general measures you can, and let the local trouble alone.

DR. A. S. WHEELOCK, Goodrich, (closing): I thank you very much for your discussion of the paper. Only a moment to discuss a few questions that were brought up. One relative to the kind of sepsis; the kind of germs. I wish again to reiterate, it does not matter; you will find as much difference between two types of streptococcus infections as you will between sapremic and the streptococic cases, and, as I was going to cite, a distinguished Chicago pathologist has shown us that the sapremic may suddenly assume the type of a streptococic infection, and the best pathologists cannot tell the difference. This occurred to some of Dr. Watkins' cases, in all of which bacterial examinations were made, and he has decided, in citing his ninety cases, that it is absolutely of no consequence. It is the symptoms that they have regarded, and the same with Merrmann in his large number of over 800 cases. He had 4 per cent. of fatalities in the first 300, 1 per cent. in the last 500.

SOME THINGS TO BE REMEMBERED IN THE MANAGEMENT OF STRICTURE *

ARTHUR EDDY WEST, M.D.
Kalamazoo, Mich.

It is not the expectation that I can contribute anything new to the subject that influenced me to choose the present topic. The management of stricture is thoroughly covered by any of the many text-books on genito-urinary surgery, much more thoroughly than is possible in the few moments at our disposal. The sole object of this paper will be to emphasize old, well-established rules governing the treatment of stricture; rules which my experience teaches me, and no doubt is true of the experience of every man here, are often observed more in the breaking than in the keeping. It is no new experience for any of us to have a man come in fear and trembling, telling us of his stricture and the treatment he has received and, far too often, his story is literally a tale of bloodshed. Every physician, I think, understands the principles governing the treatment of stricture; it is only that in the hurry of every-day practice he tries to hurry his stricture cases too; and this paper is in a way a plea to physicians to take more time and pains in the management of these cases.

The first point that I wish to emphasize is the necessity of always having a clear and definite mental picture of the anatomy and relations of the urethra. We want to know at each stage of its passage to the bladder what the tip of a sound is going to encounter. The more complete and detailed one's knowledge of the urethra is

the better, but there are a few things that are essential. These are that the urethra is a collapsed tube, 8 to 9 inches in length; that except in the prostatic and membranous portion its walls are elastic and capable of considerable distention; that it is not of uniform caliber throughout, but in the prostatic region, in the bulb and in the glans there is a considerable widening, while at the meatus, membranous portion and internal extremity there is a narrowing; that in those portions that are dilated, the dilation is towards the floor, leaving a fairly unbroken line forming the roof of the canal; that, for our purpose the canal is divided into two parts, an anterior and posterior, the anterior extending from the meatus to the beginning of the membranous, and being about $5\frac{1}{2}$ inches in length; the posterior from that point to the bladder, and being about 3 inches in length; and that the posterior part curves under the symphysis pubis, the curve forming about one-third of a circle with a radius of $2\frac{2}{5}$ inches. It also should be remembered that a congenital stricture is sometimes found at the posterior end of the fossa navicularis and that the membranous urethra is enveloped by the cut-off or compressor urethra muscle, a spasm of which sometimes leads us to believe we have a stricture at that point. While, as was said above, a more detailed knowledge of the urethra is desirable, still these facts are essential and give us a working knowledge.

The next point to be emphasized is the necessity of a clear conception of the

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nature of a stricture. A stricture while not a disease in itself, still is the result of disease processes and may be in turn the cause of disease processes. An inflammatory process in the connective tissue beneath the urethral mucosa, or an injury, gives rise to the formation of new connective tissue; with age this connective tissue contracts and in contracting narrows and distorts the urethral canal. Strictures are classified in different ways and many varieties have been described, Keyes enumerating no less than seven; but the essential thing to remember is that a stricture is the result of contracting scar-tissue, and as such should be treated. This scar-tissue, as in other localities, consists in varying proportions of white fibrous and yellow elastic connective tissue. This is important in relation to the results of treatment. If it is mostly white fibrous tissue, the stricture will be hard, yield slowly to treatment, but once stretched out tends to remain stretched. On the other hand, should the scar contain much yellow elastic tissue, the stricture dilates readily, but contracts just as readily. Such strictures may have to be cut and kept open by the frequent use of sounds during the remainder of the patients lifetime. Another thing that must be remembered is that once scar-tissue has formed it can never be completely removed. Even if the cicatricial mass is resected, a new scar forms when the severed tissues unite, and in its turn contracts and forms a stricture. So, from the nature of its cause, stricture cannot be cured in the ordinarily accepted sense of the word. What we do attempt to accomplish is a dilation of the strictured parts, a stretching out of the scar-tissue, a process which generally consumes a considerable period of time. This is a fact that the patient should be made to understand, as it is by a thorough under-

standing of his condition that his complete cooperation can be secured.

The next point to be considered is the necessity for proper instruments and their proper care. In some conditions one instrument can be made to do service for another, but this is seldom the case in the treatment of stricture. If an urethra will accommodate only a 20 F. and a 25 F. is made to do service, damage is bound to result. Better wait till the proper instrument can be secured. But the list is by no means long and every physician should have them. The necessary apparatus consists of a set of bulbous bougies for diagnostic purposes; a set of silk-web bougies, 6 to 24 F.; a set of conical sounds, 18 to 34 F.; two dozen or so whalebone filiform bougies and a few silk web filiforms; and for the few cases when rapid dilatation is necessary, a set of Gouley's tunneled sounds. Some convenient means of sterilization should be provided. I say convenient because many of us are prone to slight those things that are troublesome. Some good lubricant should always be at hand and there are several on the market. Glycerine is not slippery enough, and vaseline is too sticky, besides causing a rapid deterioration of silk and rubber instruments and making them more difficult to sterilize. Some means of irrigating the urethra is also necessary. Personally, I find a 150-gram Janet-Frank syringe meets every requirement. It is perhaps needless to say that urethral instruments need the best of care. Steel sounds corrode easily and the bougies, if not properly cared for, soon crack and roughen, and once this takes place they should not be used. A rough instrument is sure to cause damage. The sounds, after being sterilized, should be rinsed in alcohol, wiped dry and kept in a dry place. All silk instruments should be thoroughly cleaned, sterilized in formaldehyde gas, wrapped

in dry sterile gauze and kept in a dry place; they must be laid out straight, as coiling soon ruins them. I might say here in passing that soft rubber catheters, if wrapped in moist gauze and kept in a dark place will remain good for two years and over.

DIAGNOSIS

A word should be said about diagnosis. It is not sufficient to determine whether a 16 or 18 F. will pass. The location of the stricture must be determined, as well as the length of the strictured part. The number of strictures present should be learned, and as far as possible the extent of each. The irritability should be noted and likewise the condition of the urine and, if present, the extent of any infection of the urinary passage. In fact, no steps should be neglected that will enable us, before beginning treatment, to get an accurate knowledge of the conditions present.

TREATMENT

We now come to a consideration of the means employed in restoring the urethra to its normal caliber. In the past two centuries many methods and operations have been devised. Most have been tried for a variable period of time, cast aside, and dependance placed in one of the oldest, gradual dilatation. This is the simplest, for the majority of cases the best, and is the one which will be considered here.

The treatment of stricture may be divided into three stages: the preliminary stage, the dilatative stage and what may be called the "follow-up" stage. In the preliminary stage the patient is put in the best possible condition for instrumentation. A great many stricture cases come to us with a greater or less infection of the urinary passages. If the use of dilating instruments is begun at once, there

is danger of aggravating this infective process; greater liability to urethral chills, and, should gonococci be present, of inciting a joint or epididymial infection. So, except in those cases with very tight strictures that demand immediate attention, these bladder and urethral infections should be ameliorated as much as possible before beginning the work of dilatation. This is accomplished by the usual urethral and bladder irrigations with antiseptic solutions. Where the gonococcus is present, the best results are obtained by the use of silver nitrate in strengths of 1 in 10,000 and up to 1 in 4,000. In infections with other organisms, oxycyanide of mercury 1 in 5,000 seems to give better results.

The actual dilatation, as every one knows, is accomplished by the use of flexible bougies and steel sounds in gradually increasing sizes. The choice of the flexible bougie or sound is decided by the grade of the stricture to be treated. Up to 20 F. it is advisable to use the bougie. The tips of small sounds easily catch in the folds of the mucosa and the irregularities sometimes found about a stricture, and it is very easy to do much damage with them. The flexibility of the bougies makes them follow the curves of the urethra more readily and lessens the liability of injuring the urethral wall. In fact such injury is almost impossible if the penis is put well on the stretch. Another factor is the attitude of the patient towards the two. The appearance of the bougie frightens him much less, and a few weeks' treatment with them gives him confidence. When the caliber of the stricture is 20 F. or wider, the steel sound is used. It seems to me that the cicatricial mass softens more rapidly under the use of the steel sounds and the wider tip of the larger sounds used at this stage of the treatment makes them less dangerous. The steel sound,

however, is at the best a dangerous instrument and a few words regarding its use will not be out of order. The first point to consider is the size of instrument. The first sound introduced should be at least two sizes smaller than the measure of the stricture. This makes its passage easy and comparatively painless. Besides, being smaller than the stricture it carries the lubricant to the deeper parts of the urethra, whereas, if the sound is too large, the strictured part hugs it closely, wipes off every bit of the lubricant, leaving the proximal part of the instrument to traverse the deep urethra dry. The question of lubrication is an important one. If the progress of a sound is impeded, we must know if it is some obstruction at the tip of the instrument. This we cannot know if the sound is sticking to the walls of the urethra. Moreover a poorly lubricated sound is bound to cause irritation, an occurrence always to be avoided as far as possible.

The next point requiring consideration is the number of sounds used at each treatment and the length of time each should be left in place. This depends somewhat on the individual case under treatment. In the majority of cases not more than three numbers should be used at one sitting. The passage of a large number of sounds, one after the other, cannot be too strongly deplored. Each sound should be left in place ten minutes, as its presence in the urethra causes a softening and relaxation of the cicatricial tissue. This softening enables us to introduce the next size with ease. It sometimes happens, however, that enough softening does not take place to permit the introduction of the next size. If this is the case it will be noticed that there was more or less resistance to the withdrawal of the last sound used. This tugging is quite character-

istic and always contra-indicates the use of a larger sound at that sitting.

The intervals between the treatments will also depend on the individual case. Some will bear the introduction of the sounds every second or third day without irritation. The majority, however, seem to do better with a treatment every fourth or fifth day.

There is one point that cannot be too strongly emphasized—that is the necessity for gentleness. Every physician knows this, yet, judging from results, it would sometimes seem that no injunction is oftener disregarded. No force whatever should be used. The sound, after reaching the cut-off muscle, should pass into the bladder by its own weight. Even a spasm of the cut-off will be overcome in a short time by the weight of the instrument. Barring such spasm, any arrest of the sound is certainly due to error of technique or the instrument is too large, and any application of force will cause damage. Even if the force applied isn't sufficient to make a false passage, it will be sufficient to cause irritation, something as said above, every precaution should be taken to avoid. Irritation causes swelling of the strictured part, and if often repeated may even incite inflammation, which to say the least, will interrupt the treatment.

After each introduction of the sounds, the urethra should be irrigated with some mild antiseptic solution; if the sound has passed into the bladder, that should be irrigated also. This is to lessen the chances of urethral infection from bits of pus and germs that might be squeezed out of the urethral glands.

Now a word about the "follow-up" stage. Our task is not completed when the normal caliber of the urethra has been established. The stretched-out scar-tissue at the site of the stricture is going to con-

tract again, and there is no way that the time it will begin can be foretold. The patient should be instructed to report at gradually increasing intervals, and his urethra examined. When evidences of contraction are noted, the interval elapsed since the cessation of treatment should be noted, and a full size sound introduced at a slightly lessened interval through a long period of time, that is two or three years. If the recontraction is rapid, and the patient one to whom frequent visits to a physician would be a serious burden, he may be provided with sounds and in-

structed how to use them. This should be avoided however when possible, as he is almost sure to infect his bladder sooner or later.

In conclusion a word should be said about the patient himself. Not the least important factor in the successful management of stricture is the management of the patient. His condition should be carefully explained to him as it is only by thoroughly understanding his trouble that he can be expected to cooperate with the physician and submit to the long course of treatment necessary.

DISCUSSION

DR. W. E. KEANE, Detroit: I wish to congratulate the doctor on his clear expression of the subject. I think we all agree that the matter was covered very carefully. There are just a few points I would like to make which the doctor did not bring out. I believe that the average case of chronic gonorrhea that comes to the physician is carried along too long a time with the ordinary treatment of gonorrheal cases. I believe that if the patient comes in and gives a history of gonorrhea two or three years before, with freedom from any infection for two years, and then he makes his appearance at the doctor's office, saying he has had gonorrhea for two or three weeks, I believe after we apply the ordinary methods of treatment for a short time unsuccessfully we should not hesitate to explore in with the bougie à boule and see if he has not got stricture. Ordinarily the patient believes he has no stricture unless he has inability to pass water. That is not true. A great many times the patient will pass water with freedom and have a stricture of a very small caliber. The first point I would make, therefore, is that we wait a little too long in cases of gonorrhea before determining whether the patient has complication of stricture or not.

Again, I think the meatus that is below 24 should be cut. Strictures do exist which a 24 French bulb will not detect, and they are of sufficient importance to require dilatation.

The question of the patient himself I think is always an important one. I think he should be instructed at the beginning that a stricture

can be cured clinically, but anatomically we cannot expect to change the scarred tissue. We can stretch it; we can make him comfortable, and clinically he will be cured, but anatomically we cannot cure him, and it is well to explain this to the average patient, or to all patients, that you cannot "cut out" a stricture. You may tell him you can stretch it, and if you make it clear and that you can cure him by that means and that he will remain cured, for a long period, why, you will accomplish a great deal.

The method of treatment by electrolysis I would like to say a word on. A great many patients will come to you and say they have been treated by such and such a doctor by electricity. I do not know what your experience has been, but my own experience with electricity leads me to the conclusion that it is entirely worthless. Some get apparent results, but they get results from the introduction of the steel bulb. That will cause some dilatation, and they get some results from it, but I do not believe they get any results whatever from the use of electricity. My time is up, and I will finish quickly on one or two points I desire to mention. One, as to diagnosis. If we get free hemorrhage it is pretty certain we are getting in a false passage, even with a small instrument.

A final word with regard to the use of the smaller bougies. The doctor spoke of a number of different instruments used in the treatment of strictures, but I do not believe he mentioned the Lafort instrument. I do not know what the experience of the members

present has been with this instrument, but Dr. Robbins and myself have found it invaluable in the treatment of strictures of very small caliber. Patients come in continually who have consulted several men and on whom have been tried all sorts of instruments without success. This filiform will slip in readily and will pass the stricture. With the filiform in the bladder it is a simple matter to thread on a steel sound of small caliber or a catheter in case we have retention. There is no danger of damage to the urethra by this method and the patient suffers less than by any other method that I know of.

DR. F. B. MARSHALL, Muskegon: During the past eighteen months I have been using quinin-urea, 20 per cent. solution, as a local anesthetic for dilating stricture of the urethra with entire satisfaction. The quinin solution is held in the urethra ten to fifteen minutes before instruments are used. The three-bottle urinary test is made on all patients, which frequently gives a key to the condition. Before injecting the quinin solution into the urethra, I irrigate the anterior urethra with an alkaline antiseptic. After the usual examination for stricture, if found, the urethra is anesthetized as before mentioned, and the stricture divided with an Otis-Wyeth urethrotome. After division of the stricture, a Leusman's dilating irrigator is introduced through which a very weak iodine solution, temperature 120 F., is allowed to run. One gallon of this iodine solution is used for washing the urethra. The iodine solution is used through the dilating irrigator every third to fifth day for two or three weeks, after which sounds are employed. This method of treating urethral stricture has proved most satisfactory.

DR. F. W. ROBBINS, Detroit: I did not expect to say anything in this discussion, having heard a part of the paper only, but am called to my feet particularly by the remarks of the last speaker, and I should be very glad to hear from him, or have him read a paper at another session on the treatment of stricture, because I can assure you that when he begins to impress on the mind of the general practitioner and the general surgeon that the treatment for stricture is urethrotomy, he is going way beyond what is believed today by genito-urinary men as to the proper treatment of stricture. To illustrate: A man who has one of the largest urinary practices in the country told me a few years ago

that it had been three or four years since he had done internal urethrotomy, and I am sure it is very unusual to find a man who does internal urethrotomy as a cure for stricture. There are strictures and strictures. Some forms are elastic, and narrow in the anterior urethra. In such the urethrotome is a very splendid instrument. I certainly believe in the use of the urethrotome, but it should be used only in a small proportion of cases. Gradual dilatation, once in five, six or seven days, is the proper treatment for the removal of stricture in the pendulous urethra. I am sorry to say occasionally we find men who are using the urethrotome on strictures near the bulb. In such needing operating an external not internal urethrotomy should be done.

DR. LENTZ: Of all the interesting subjects as presented here this is the most interesting to me, and I want to say one word in regard to the instrument the gentleman spoke of before. I have used that instrument for the past twelve years, and I can only recommend it in the highest terms. If in examining the urethra the first time the patient comes to your office, you find it difficult to make a clear diagnosis, this instrument will furnish you a greater source of information than any other, and it will avoid possible injury by the use of other instruments first. I would like to hear a paper from the first speaker on this subject, as to his way of operating. I discarded that method years ago.

DR. A. HENRI COTÉ: I did not expect to discuss this paper. There are two or three points I might mention that are interesting to me and were not mentioned in the paper nor in the discussion. A number of these cases come to the man who is doing special work in this line after the attending physician has treated them for a number of weeks with astringent solutions, and apparently cannot get rid of that "last drop." The patient has a sound passed, possibly one or two irrigations following it, and the discharge ceases. There will be found granulations present in the urethra which will keep up a discharge. This is a practical point which seems to be overlooked by a great many physicians. It is very simple, and yet it is not taken cognizance of. As one of the speakers said, if the meatus will not admit the sound, it should be cut. Very frequently there is a small ulceration back of the meatus which will not heal unless the meatus is cut. Immediately after being

divided and kept clean with an antiseptic solution it will heal.

There is one question I would like to ask the author of the paper, and that is, What degree of force does he use in the endeavor to get through an apparently impervious stricture of the posterior region?

DR. A. E. WEST, Kalamazoo (closing): In regard to the question of force used in getting through an apparently impervious stricture, I can say that so far I have never found it necessary to use any force at all. In strictures of that kind we generally use the silk-web filiform and not the whale-bone instru-

ment. The silk filiform is so pliable that it is impossible to employ force with it worthy the name of force. It is the preliminary use of the silk-web filiform that gives its value to the Lafort instrument.

I would like to emphasize what Dr. Keane said with reference to electricity in the treatment of stricture. I think its use should be strongly deplored, and to me it seems that the electrical treatment of stricture is simply an excellent means of getting the patient's money. There is nothing further I care to say. I thank the gentlemen for the very kind and practical discussion of my paper.

ANAPHYLAXIS

While immunity is one of the most important phases of modern medicine, says S. G. F. Grinnan, Richmond, Va. (*Journal A. M. A.*, January 20), it is necessary for its understanding that we also understand anaphylaxis, or the condition of acquired or congenital hypersusceptibility of an organism to a strange protein or antigen with a reaction body formed in the organism undergoing immunity. The substance must be protein in nature, though not all proteins will cause anaphylaxis. He gives as an example of anaphylaxis the injection of horse serum into a guinea-pig sensitizing it to a second dose. He reviews the literature of the subject, showing that anaphylaxis is a specific reaction, and especially notices the

conditions in which it may be induced by horse serum injections, as the horse is the animal from which serums are chiefly obtained. The toxic action of milk to certain children and of other articles of diet are also noticed in this connection. The reactions in the use of serum occurring after previous inoculations are principally due to this cause and persons liable to asthma or possessing special susceptibility to horse emanations seem to be particularly liable to these accidents. A test of susceptibility in such cases would be of great value. The subject is gone into in detail and he points out the importance of the study of this particular subject, especially in connection with the use of vaccines and antisera.

SOME SUGGESTIONS REGARDING THE MEANS OF DETECTING ADVERSE SELECTION

Arthur B. Wood, Canada, discusses the importance in life insurance of avoiding risks of a fraudulent nature, and presents some points to assist one in doing this. At the same time the referee should not be too severe in rejecting applicants. Plans for insuring lives that are clearly under the average should be commended, since it is just these risks that need insurance. All speculative risks should be refused. The author believes that medical selection is of value as is illustrated by the high death-rate that can be demonstrated among rejected applicants. Good faith in the insured is essential. Self-selected risks are generally good ones. The natural interest in a case of insurance is that of a wife in her husband, that of a child in its father, that of a creditor in a debtor, that of a partner in a co-partner, and that of an individual in another whose

death would result in financial loss. Where the beneficiary is to pay the premium the risk should not be accepted. A creditor has a legal right to insure a debtor, but when he risks the premiums and the principal at once there is generally a reason for expecting the death of the debtor. Insurances for large amounts should be carefully looked into. Applications for repeated insurance should be carefully questioned. One should be careful of young ages at entrance, as well as of advanced ages. Adverse selection is to be feared under the cheap forms of policy. Females who are single and in business are generally good risks; married women are less so. Of occupations that of the liquor dealer is likely to have a greater mortality. Special hazard attaches to lack of intelligence. Business from outside sources is apt to be bad. —*Medical Record*, Nov. 25, 1911.

OFFICE MANAGEMENT OF RECTAL DISEASES, SURGICAL AND NON-SURGICAL *

JAMES A. McVEIGH, M.D.
Detroit

This paper has been prepared for the Section on Gynecology and Obstetrics because of the intimate relationship between proctology and gynecology, and I have taken occasion in that portion of this paper bearing on the reflexes to call attention to the action of the reflexes as they are noted in these two special lines of practice. It will be necessary, owing to time limitation, to cover this subject in a general way only, leaving out the details, but the paper is presented in the hope that it may be effective in calling attention to conditions frequently met with, yet which do not always receive the serious consideration to which, because of the discomfort, pain and possible serious consequences to the patient, they are entitled.

For a long time the diseases of the rectum and anus were to all intents and purposes treated indifferently by the medical profession, and as a result proved to be a lucrative field for the charlatan and itinerant quack who were quick to realize its possibilities and used it as a means to foist their cure-alls and devices of various sorts on a suffering and anxious public. By degrees however, the medical profession has come to seriously consider these conditions of the rectum and anus of much importance, both as to the patient's personal comfort and to their possible effect on his future health, with the result that this branch of practice is being rapidly restored to the hands of men

engaged in the legitimate practice of medicine.

Much of the success in the management of rectal disease depends on the method of conducting the examination, for without a thorough and complete examination it is often impossible to make a definite diagnosis. A careful examination in these cases is most important, for under careless inspection the true source of the disease is apt to be obscured and serious results may follow the entirely wrong or inadequate treatment which may be subsequent to a careless examination and consequent faulty diagnosis. It often happens that a patient on consulting a physician for trouble in this region is allowed to make his own diagnosis and outline a course of treatment. This is entirely wrong and often results in serious trouble, eventually, for the patient, because the true source of trouble, or possibly the real existing condition, which would be revealed by proper examination on the part of the physician, is not understood. As an instance of what may follow neglect of this sort, may be cited thrombotic hemorrhoids which have been neglected and which have developed into abscesses as a result of such neglect. A thorough examination which will render possible an early diagnosis, followed by the proper line of treatment will, in the majority of cases, effect a complete and rapid cure, for there is no class of cases more readily amenable to proper treatment (and this can only follow a careful examination and correct diagnosis) than that

* Read at the Forty-Sixth Annual Meeting of the Michigan State Medical Society, Detroit, Sept. 27-28, 1911.

class of cases coming under the head of diseases of rectum and anus. The examination should begin with an inquiry into the patient's history. This often serves to put the patient at ease and inspires in his mind a confidence in the physician which is always a valuable adjunct in the treatment of any disease. Moreover a person suffering from rectal trouble is usually nervous and depressed, and to be permitted to recite his personal and family history, in so far as it may have a bearing on the case in hand, to a physician who is patient and attentive, will frequently serve to calm the patient and elicit from him more satisfactory replies to such questions as the physician may ask him. He should be questioned regarding the state of his bowels, whether constipated or whether there is diarrhea, if there is pain, protrusion, discharge, or any other questions along this line that may be deemed advisable. If pain is present, inquiry should be made of the time it occurs, whether during the act of defecation or afterward, whether it is sharp and lancinating or dull in character; whether it is confined to the anus or reflected down the left limb or to the back; how long it lasts; does it disappear abruptly or subside gradually?

In regard to protrusion, inquiry should be made of the nature of such protrusion, of the time it occurs and whether or not it is possible for the patient to return the protrusion. As to discharge, the patient should be asked regarding the nature of it, whether it is bloody in appearance or streaked with blood and whether the discharge is constant or occurs only at intervals. Having made this investigation, the physician should proceed to make a physical examination, for after all it should be borne in mind that the symptoms as outlined by the patient only give a general idea of the nature of the trouble and a

diagnosis should be made only after a careful and thorough examination on the part of the physician himself. It is a well-known fact that in many instances the statement of the average patient is unreliable and the physician who makes a diagnosis based solely on the statements of the patient and prescribes accordingly will be apt to find himself at some time or other in a very embarrassing predicament.

For the purpose of making an examination of a patient with rectal or anal ailment there are a number of positions each of which has its advocates. For obvious reasons it will be impossible to refer to them all at this time and accordingly mention will be made only of the three positions that are generally employed, viz., the Sims, or left lateral, the lithotomy and the knee-chest. The first named, the Sims, is the one generally used in making an office examination. It is less uncomfortable and embarrassing to the patient than either of the others and possesses practically all of their advantages, although there are cases in which either of the other positions is more satisfactory. To place the patient in this position, he is directed to lie on the table on his left side with the left arm behind his back, the right leg drawn well up toward the body and with the buttocks brought well over to the side of the table where the examiner stands. It is always advisable wherever possible before proceeding with the examination to have the patient's bowel emptied by means of an enema, in order that the rectum may be cleared of a possible accumulation of fecal material, the presence of which might interfere with the examination. With the patient in whatever position may be determined on, an inspection of the external parts should be made. The general appearance of the anus and the surrounding skin should be noted. If there has been a pruritic condi-

tion, the possible presence of parasites should be sought out. We should note whether there is swelling or redness about the anus and whether the surrounding skin is excoriated or sluggish looking and whether there is an abnormal moistness about the anus and if so the nature of it. We should also look for scars, external fistulous openings and ulcerations. If a fistulous opening is observed, it is often possible to trace the course of the fistula by means of an indurated pencil-like canal which leads from the external to the internal opening. By this method of examining we are able to likewise observe external hemorrhoids which may be either thrombotic or inflamed, either type of which is extremely painful. If there is protrusion, it should be carefully observed for the possible presence of ulcerations, etc. Now, by separating the buttocks widely and asking the patient to strain slightly, almost the entire anal canal can be brought into view. It is here that irritable ulcers or fissures and the internal openings of fistulas are found and quite frequently too internal hemorrhoids may be observed. The general appearance of the anus should be carefully inspected, for the source of the trouble for which the physician is consulted may be found here but may be overlooked if gone over carelessly. Following these procedures comes the digital examination and it is most important, for the educated finger will alone reveal many pathologic conditions, such as stricture of the rectum, impacted feces, polypi and ulcerations, especially those long standing in which the edges have become indurated. It is rarely possible, however, to determine the presence of internal hemorrhoids by the sense of touch unless they have become much thickened by long-continued inflammatory process. The examining finger should be well anointed with a suitable lubricant,

and by directing it forward and with a slightly boring motion the sphincter muscles will gradually relax and allow the finger to pass into the rectum. The finger should be swept around the rectal walls to note the presence of any abnormal or pathologic condition, and on withdrawal particular attention should be given to the space between the sphincter muscles. It is here, as previously mentioned, that the educated finger will reveal the presence of the internal opening of a fistula. As for the instrumental examination, it is made by means of the speculum or proctoscope or sigmoidoscope. There are many different varieties of specula on the market, each of which has its supporters. Those devised by Dr. Mathews and Dr. Cook are very satisfactory, because they obscure but little of the field which is being inspected. The proctoscope is preferred by many. With the obturator in place, it is gently introduced into the rectum when the obturator is withdrawn and, by means of a good natural or reflected artificial light, the rectum and anal canal can be carefully inspected as the cylinder itself is slowly withdrawn. The sigmoidoscope is used in the same manner but should be used with care and only by one familiar with the anatomic arrangement of the rectum and sigmoid. The careless or ignorant use of this instrument may be followed by very serious results, such as a rupture of the bowel which might easily occur in the presence of a pathologic condition. An early diagnosis in diseases of this region is always desirable, for delay in making a diagnosis and proceeding with the proper course of treatment may jeopardize the patient's life or at least prolong his period of suffering unnecessarily. Hence it is obvious that the physician should acquaint himself with these instruments and be ready to use them when necessary in conducting an examination. The treatment

of this class of cases should always embrace, where possible, the removal of the cause of the disease. It is impossible to take up this important subject in detail, at this time, but it should be borne in mind that having a proper examination and established a diagnosis, the plan of treatment of the various diseases peculiar to this region will suggest itself. There are conditions which will yield to palliative or local treatment but (and though this may be considered a broad statement, it will be endorsed by men of much experience in this line of work), the great majority of these affections call for operative interference. Local treatment will afford relief in some cases, but not infrequently will this relief be but temporary, and eventually the patient will be compelled to submit to an operation in order to secure permanent relief. The best judgment of a physician may tell him at the time of examination that an operation is called for, but owing to the patient's timidity, together with his expressed determination not to submit to the knife, he (the physician) adopts palliative measures, notwithstanding the fact that he feels assured that the result of such treatment will not be satisfactory. The results of such methods are almost certain to be a dissatisfied patient, and to this patient as well as to his friends and acquaintances, a discredited physician. The physician owes it to himself and to his patient in such a case to state frankly the facts and what he considers the necessary treatment. If an operation is then declined and palliative measures insisted on, the burden rests on the shoulders of the patient and not of the physician.

The subject of reflexes is very engrossing and is one to which the medical profession is giving much thought and attention. It is a very important branch of the study of medicine and one that affects

every division to a greater or less extent, but it is probable that those engaged in the special practice of gynecology meet the evidences of it more frequently than any others.

The following is quoted from Dr. Joseph M. Mathews' book on Diseases of the Rectum, Anus and Sigmoid Flexure, on reflex action. He says: "To have reflex action in any case, we must have (a) afferent impressions resulting from the influence of a foreign body or a pathologic state (such as inflammation or ulceration) acting as an irritant on afferent nerves, either in some part of their course or in the peripheric sites of distribution—whether such sites be situated on the external surface of the body or on some part of one or other of the mucous surfaces within the body. Thus it happens that the determining cause may in some cases be associated with painful impressions, though in many other instances such impressions may be more or less completely absent. Occasionally mental emotions may take the place of peripheric impressions as inciters of abnormal reflex phenomena. The most essential factor (b) is that the afferent impressions (painful or non-painful) produced by the irritant or pathologic state should pass from the nerves conveying them through a related nerve center which, from one or other cause, chances to be in a state of exalted activity and thence (c) be reflected along one or other set of efferent nerves, so as to produce effects of this or that order. As efferent nerves are distributed to glands and to muscles (both involuntary and voluntary), reflex phenomena may show themselves in one or other of the two principal directions: (1) by the modification of the quantity or quality of some secretion; (2) by the production of spasmodic contractions in certain muscles,

either of the involuntary or voluntary type."

From this it can be seen that disturbances manifesting themselves in and about the rectum may be referred from the generative organs and vice versa, since the spinal nerves from which the pelvic viscera, including the internal organs of generation, derive their supply are given off from the same point in the spinal cord. It is not unusual to find women who suffer from constipation, hemorrhoids or other rectal disturbance complain of pain or discomfort in the back, at the mouth of the womb, down the thighs, in the region

of the ovaries, etc., and it is no less unusual to find those who may be suffering from disease in any of these regions who complain of pain or uneasiness about the rectum and anus and who are satisfied in their own minds that they are victims of rectal disease. Therefore it behooves the physician who is consulted in such cases to bear in mind the action of the reflexes, for it may be the means of pointing the way to a diagnosis which, without a knowledge of reflex action, might be, if not entirely impossible, at least difficult to make.

32 Adams Ave. W.

DISCUSSION

DR. SAMUEL G. GANT, New York: Dr. McVeigh has practically covered fully the subject of proctology. No doubt disturbances in neighboring organs and distant parts are manifest in the rectum and vice versa. I have observed patients who thought they had some vaginal or uterine trouble when the disturbance was due to fecal impaction or a foreign body in the rectum or to anal fissure and others who complained of discomfort or pain in the rectum incited by the pressure of the uterus or a pesary. Inspection of the anus and buttocks should constitute an important part of the examination since by this method it can be at once determined if a patient suffers from fistula, fissure, venereal warts, projecting hemorrhoids or excoriation of the skin which indicates a chronic rectal discharge.

Pain is an important diagnostic sign in the more common rectal ailments but is not characteristic of cancer as some believe. If a patient complains of burning pain and the parts are moist it indicates a chronic ulceration; on the other hand, when pain is severe and continuous, an abscess is forming; but when it is agonizing, located in the sacral region and occurs shortly following stool, pain is pathognomonic of fissure.

In attempting a diagnosis, it is well to remember that 90 per cent. of all rectal diseases occur in the low inch and a half of the rectum, consequently it is important to carefully examine the anal canal.

Regarding fistulas I prefer division and the open method to their excision and suture and

have found the injection of bismuth paste of little value. There is no danger of incontinence following division of the sphincter when it is cut at a right angle and the wound is drained with a small instead of being packed with a large piece of gauze which destroys fresh granulations, arrests healing and leaves a groove through which the feces will escape.

Once more I wish to congratulate Dr. McVeigh on his most interesting and thoroughly practical paper.

DR. LOUIS J. HIRSCHMAN, Detroit: I simply want to add my word of commendation to Dr. McVeigh for the immense amount of good material in his paper. I want to emphasize one point, on the matter of rectal examination, spoken at and to and around by Dr. Gant, and that is the point that many people attempt to examine too high to find the pathology. The student will gain more by what he finds by withdrawing his finger than in any other way, and by working it around from side to side he will get all the information he wants, and it will cause less pain to the patient.

I take issue on one point, the point of wearing rubber-gloves. I am not afraid of any rectum, but I do have some consideration for my patients. I find by using a thin finger cot or glove I can save some pain to some sensitive patients—I can spare some of my patients with a sensitive rectum some pain.

There is the question of abstinence from pus. You will often find on entering a rectum a purulent discharge, so I felt that it was

better for me and my patient, and the other patients, to use rubber-protectors on my fingers wherever I could. It is perfectly useless to attempt to take up many of the points, except to emphasize them.

I want to say that papers of this kind, by men working in special fields, who will elaborate and indicate to the other men some of the easy means of making examinations, will create a better understanding, and somewhat narrow the wall between the proctologist and the gynecologist.

DR. WILLIAM L. DICKINSON, Saginaw: I congratulate Dr. McVeigh on the many excellent points brought out in his paper. When Dr. Gant was telling of the gentlemen from Grand Rapids it brought to my mind the case of a man who called on me recently, which shows the necessity of making a careful examination of the rectum. He was in great pain at the time, and could only sit on the side of the chair, as pressure increased his discomfort. He said he had been sick for three weeks with piles and had been using Pyramid Pile Cure. On examination, pus appeared at the anal outlet, and when I attempted to introduce the finger into the bowel I felt something lying across it, and said to him, "There is something in here—it feels like a stick, or something of the kind." Having anesthetized the sphincters with cocaine I was able to introduce a Pratt bivalve speculum and dilate the muscles, and remove a piece of a wooden toothpick a little more than two inches long. Patient did not remember when he swallowed it. At the St. Paul meeting of the American Proctologic Society a large bronze door knob was shown us that had been removed from a patient's rectum.

A MEMBER: I think the fellow that comes in last can tell the biggest story, but I want to just tell this gentleman of an experience that a Dr. Wallace, in Manton, near Cadillac, had a year ago, when called to see a man who was somewhat demented. The patient had introduced into his rectum a stone, 4 inches in diameter, which was removed in no other way, and could not be, except by a pair of obstetrical forceps. To me it was one of the most remarkable things I ever heard of. I

made an examination of the man's rectum, and by actual practice for years that man had succeeded in developing the rectum until it was so large that when it was perfectly clear he could introduce an ordinary door-knob or ordinary instrument of that size. So much for foreign bodies. We have the stone in our library up there, and it certainly is a great curiosity. In the examination of rectums I find it is a very difficult thing to make one and make it thoroughly without producing more or less pain, and I find that it is a very difficult thing, after you have examined the rectum, to be dead sure what you have. There is one thing, and some of the gentlemen that have spoken here today probably have had some experience in it, in trying to account for a pain in the rectum. You will find no hemorrhoids, you will find no fistuls, nor fissures, you find no enlarged prostate glands; in fact, you can find scarcely anything that can account for the suffering of some of these persons, and yet, with very little attention to the lower end of the spinal column you will find everything to account for it. Many persons will fracture the coccyx, and that many times brings on many rectal pains. I have had one patient who for a number of years was reduced to extreme emaciation and a great degree of nervousness, so much so that they thought the young man would have to be sent to the asylum, and have had all these symptoms promptly removed by the removal of the coccyx; so that I say in all these rectal troubles it is well not to forget the bony part as well as the muscular and the other tissues and soft parts of the anatomy.

DR. J. A. McVEIGH, Detroit, (closing): I have not much to say in closing this discussion, but I simply want to emphasize the necessity of making a careful and thorough examination in all these cases. If your examination is efficient and careful, the diagnosis will be fairly easy, and after you have made a diagnosis, as I said in my paper, the manner of treatment will outline itself. I am very much indebted to those gentlemen who have so courteously and kindly discussed my paper.

RESULTS OF TREATMENT AT THE MICHIGAN STATE SANATORIUM*

E. B. PIERCE, M.D.
Howell, Mich.

The results of treatment at sanatoriums, as usually given out, are very unsatisfactory and, as a rule barely noticed by the average practitioner. The tables presented and the terms used, while generally familiar, are not understood in their exactness, and, therefore, the facts presented do not receive merited attention. There can be no doubt as to the meaning of the terms "living," "dead" and "at work," so that it is hoped that this paper will be of some value to you in presenting the results ascertained from inquiry of the patients who have been at the Michigan State Sanatorium.

The policy on which the institution was founded demanded that the patients admitted be incipient or very early cases, but in no way has this been carried out, for it was at once ascertained that such cases do not desire treatment, and it is difficult to convince them that they have the disease; therefore such cases rarely appear, and they are the ones which receive the most good from treatment.

Moderately advanced cases come in large numbers, and even far advanced to some extent, so that now the policy is to receive all who appear favorable, and, if they prove otherwise, to return them to their friends as soon as they have obtained a knowledge of how to properly safeguard themselves. The earlier, less advanced cases are always given the preference.

Patients on admittance are classified in three divisions according to the severity of the disease. This is not done at once, but after the actual conditions existing have been ascertained by observation for several weeks; we believe this method is productive of the fewest errors. The National Association classification is used, but for general work we find the following divisions of great assistance:

EXPLANATION OF TERMS

INCIPIENT.—Cough and all symptoms slight, possibly no symptoms except hemorrhage from the lungs, little or no rise of temperature, little or no acceleration of pulse, area of involvement slight, patient feels able to work.

MODERATELY ADVANCED.—Moderate amount of cough, expectoration and loss of weight, patient may or may not have fever, moderate amount of involvement, may or may not work full time, but is not fit to do so.

FAR ADVANCED.—Severe cough, abundant expectoration, pronounced loss of weight, more or less fever, extensive involvement, unable to work.

The symptoms of chills, night sweats, pleurisy, pains and hemorrhage may or may not be present in any stage of the disease.

On discharge each patient's history is carefully considered, and if they have been under treatment thirty days or more, they are included in the classification.

They are classified as follows:

APPARENTLY CURED.—All constitutional symptoms, with expectoration and bacilli, absent for three months. Signs of healed lesions.

ARRESTED.—Absence of all constitutional symptoms; expectoration, with bacilli, absent

* Read at the Forty-Sixth Annual Meeting of the Michigan State Medical Society, Detroit, Sept. 27-28, 1911.

or not; physical signs stationary or retrograding. This for at least three months.

IMPROVED.—Constitutional symptoms lessened or absent, physical signs improved or unchanged; cough, with bacilli, usually present.

UNIMPROVED.—All essential symptoms and signs unabated or increased.

obtained only after much further persistent effort. A more accurate impression of reports would be obtained if the word "arrest" were substituted for "cure" in all cases.

After the proper classification has been made, a card is prepared for each indi-



Fig. 1.—Shows proportion of "living" and "dead" July 1, 1910. Classified on admission.

Frequently lay and medical visitors inquire, How many cures do you have? And they appear surprised when we tell them that all we can expect from the treatment here is an arrest of the disease, and the condition of "cure" can be

vidual. Cards allow for name, address, club affiliation, and address of relative; also for ten reports. For convenience, different colors are used: pink for incipient cases; yellow for moderately advanced; and blue for far advanced. These are

ing the institution or not, condition of cough, hemorrhage, sputum, temperature and other ailments.

RESULTS AT OTHER SANATORIUMS

Other sanatoriums have published results from time to time. The most compre-

One thousand, two hundred and nine patients living out of 2,553. Of these 1,058, or 41 per cent. of the whole, are engaged in or able to do some work. That 87.5 per cent. of the 1,209 alive are still able to work. That the patients discharged apparently cured have a death-rate two or three times, the patients

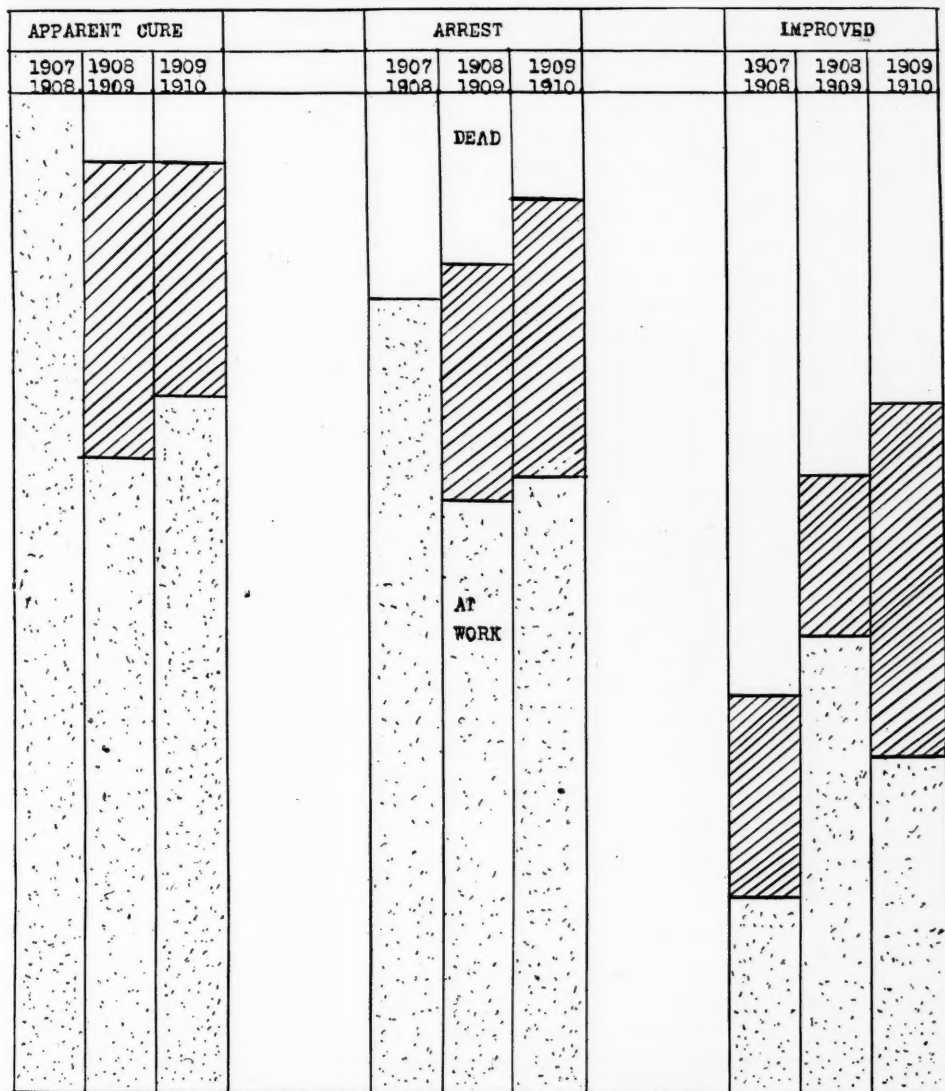


Fig. 3.—Shows proportion of those working, classified according to condition on discharge.

hensive and complete report at hand was given at the Sixth International Congress by Brown, covering twenty-three years of the history of the Adirondack Cottage Sanatorium. We quote from his report:

with disease arrested ten to five times that of the general population.

We cannot give you such a complete report, but a study of the 195 cases discharged to July 1, 1910, including:

Incipient to number.....	57
M. A.....	105
F. A.....	33
Total	195

shows that of these in 1911:

When only the "arrested" and "apparent cures" are considered, we find that 72 per cent. are able to work.

These results are graphically depicted on the charts shown.

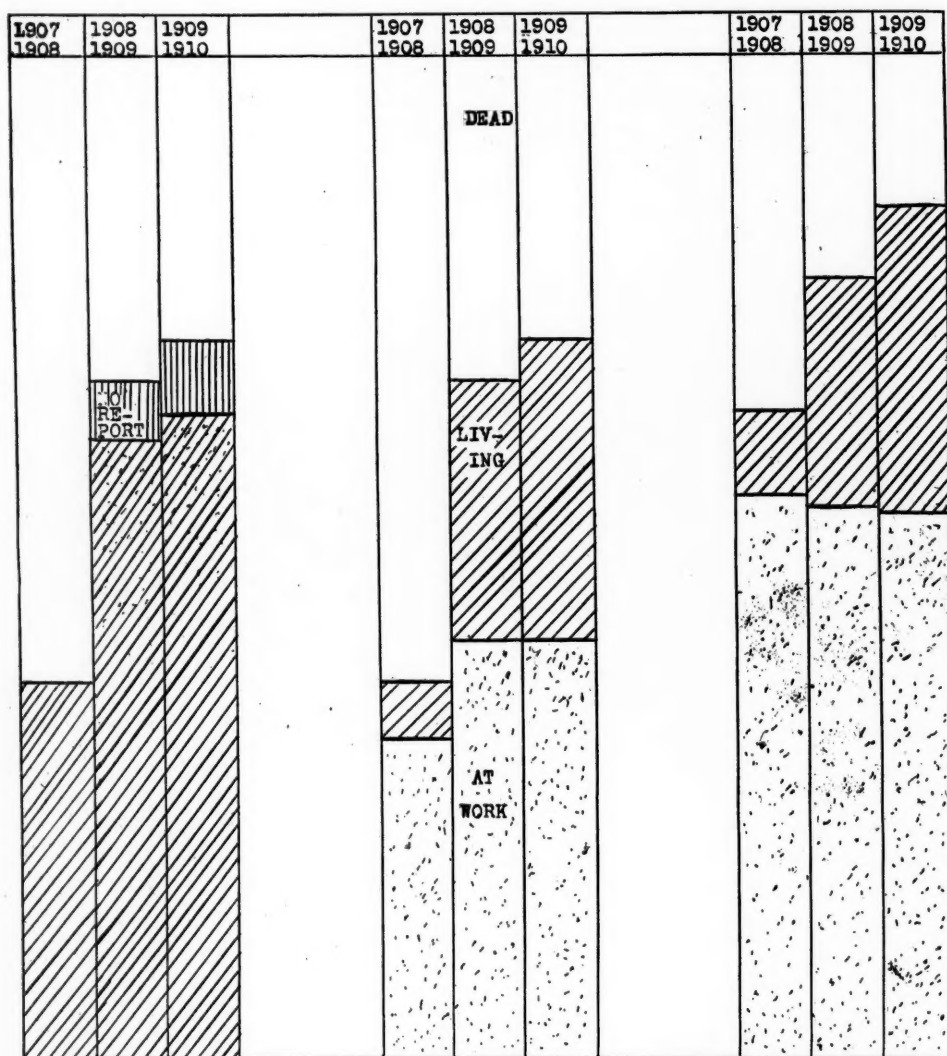


Fig. I.

Fig. II.

Fig. III.

Fig. IV.—Summary of Figures I, II and III. The last discharge number considered has been away from the sanatorium at least one year.

Sixty-seven had died; of the 128 alive, eighty, or 41 per cent. of the whole number—62.5 per cent. of the living—were able to do some work.

Our percentage of the whole number happens to be the same as at the Adirondack Cottage Sanatorium.

To sum up, this study shows us:

1. The great importance of keeping an after-history of our cases.
2. That definite results can be obtained from treatment, and
3. That the results obtained here compare favorably with older institutions.

DISCUSSION

SECRETARY CROSBY: I would like to ask Dr. Pierce if he has trouble in finding room for all the patients that are sent there? I would like to ask also if some of them had to be placed on the waiting list:

DR. E. B. PIERCE, Howell: A year ago the state had six new cottages built, which increased our capacity from forty-six to eighty, but the appropriation for maintenance for that same year was not increased, so that while we had a capacity for eighty we were unable to use it, and we went through the year with an average of fifty-five cases. This year the legislature has given us a larger appropriation for maintenance, and we believe that we have sufficient funds to run the institution to its full capacity. I think by December we shall have as many as we can care for. Just now we are accepting every case that applies which appears at all favorable, as we have empty beds. A little later we shall have still more room, as we are using one of the cottages that we should use for patients to house the help.

The other question asks to state the danger to the community of cases which do not cough or raise. I suppose that question covers the arrested cases as well. It seems to me that, with the proper training such as we endeavor to give our patients at Howell and with the knowledge of the disease that we try to instill into their minds, they ought to be safe when they return home, and therefore, not dangerous to the community. I say they ought not to be, but you know as well as I do how hard it is for people to live up to what they know is right, and you all know that a man or woman

who is on the street will cough and expectorate there rather than use the sputum box. One of our patients came to Detroit a while ago and got on a crowded street car. He was obliged to expectorate, so he used his box. He says that the car was emptied before it had gone another block, and, because of this incident, he used the street thereafter in the same manner as the rest of the public. It is hard for the individual to fight against the opinion that pervades the public, that is, that he is a dangerous individual, even though he knows that he is doing wrong by promiscuous spitting.

A certain dentist asked the other day if I believed there was any danger to him in treating sanitarium patients. I told him that it seemed to me that the patients from the sanitarium were more safe than the patients from the village or farm because when they were obliged to cough, they let him know and did not cough in his face, while ill people from other sections are not careful and cough indiscriminately.

There is no danger from the case which does not cough or raise, and there should be no danger from the arrested cases.

In presenting this report to you today, we do not wish you to lose sight of the fact that we consider the institution to be of the greatest value as an educational factor. We are not attempting to "cure" people in the ordinary sense of the word, but we are chiefly attempting to teach them to take care of themselves so that when they go home they may be able to continue the treatment and not be a menace to the community.

A LOCAL ISOLATION HOSPITAL

A. C. Haven, Lake Forest, Ill. (*Journal A. M. A.*, January 27), says that every community should provide a hospital for contagious diseases, as treatment of such cases in private houses is very unsatisfactory. The location should be secluded and the building planned for the purpose, one story and fire-proof, adapted for isolating not only the sexes but different diseases, simultaneously, with accommodations for exchanging clothes for physicians, for disinfecting, cleansing, etc. The caretaker should occupy a separate cottage, which should contain in its basement the heat-

ing plant for the entire hospital and every ward separately. Each ward should have its own dishes and outfit. The grounds should be attractively laid out, allowing for convalescents such outdoor privileges as can be permitted. The term "contagious" or "pest" house should be replaced by more euphonious terms. These are the ideals in substance, which have inspired the trustees and architect of the Lake Forest Isolation Hospital, the elevations and plans of which are illustrated. It is the only hospital in the north shore suburbs of Chicago exclusively for contagious diseases.

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MARCH

EDITORIAL

FORTY-SEVENTH ANNUAL MEETING

Notice is hereby given of the forty-seventh annual meeting of the Michigan State Medical Society to be held in Muskegon June 19 and 20, 1912. All county societies not having elected delegates should do so at once and send the names to the secretary that the proper credentials may be issued.

All members are invited to attend this meeting. The profession of Muskegon is making great effort to entertain us and issues a cordial invitation to every member to be present. Dr. John B.

Roberts of Philadelphia will deliver the scientific address before the general session. The new section on diseases of the eye, ear, nose and throat will hold its first session this year and the officers are pleased to announce that Dr. Otto Freer of Chicago will be present and give us a paper.

Notice is hereby given, also, of the fourth annual meeting of the County Secretaries Association, which will be held the afternoon of June 18, in Muskegon. It is urgently requested that all county secretaries who possibly can be present at this meeting as the work of the county secretaries is to a large extent the life of the Society. The County Secretaries Association is organized for the benefit of the county societies. In cases where it is possible county societies would honor themselves by sending their secretaries to this meeting.

The program for the annual meeting of the Society and of the Secretaries Association is now being made up and anyone wishing a place should correspond with the respective secretary at once. For a list of the secretaries see advertising page 2.

ETHICS

III. THE TONGUE

The duty of man to man, the duty of brother to brother is exemplified in no walk of life more than in the medical profession. The practice of medicine at best is difficult enough; the responsibilities and cares of the doctor in properly attending his flock are burdens indeed, without multiplying them. The Medicolegal Committee in its last report has this to say: "Our attorneys believe that every threat of malpractice arises from the jealousy of a rival physician. While we do not hold such radical opinions, we do know that some other physician is at the bottom of

very many suits and threats of suits, and can prove it in many instances."¹

How frequently in conversation do we hear one doctor speak disparagingly of his neighbor. How frequently does one doctor speak lightly of another to laymen. How frequently, when called to a new patient and told of the previous treatment, does the doctor answer by a shrug of the shoulders.

In times happily past—a generation or so ago—it was the custom for doctors to fight, to belittle each other. Those were the days of the family physician in all his vengeance, when each doctor had his following in the community. The patients would swear by their doctor and would admit no good in his competitor. In those days doctors were competitors.

Now we are not competitors; we are confrères; we are brothers. Years ago, when called to see a patient who had been under the care of another, the doctor promptly and ostentatiously threw his predecessor's medicine out of the window—he had few good words for the other doctor.

The condition of the profession is better. We do not do these things so much now; but has the old-time custom entirely disappeared? The inference from the report of the Medicolegal Committee is, obviously, no.

For two years past the Michigan State Medical Society has been conducting the defense of its members in civil malpractice cases. We have no condition written in fine print in the policy which will allow us to decline to defend our members as has been done by some commercial companies to the sorrow of the insured. We defend any civil malpractice suit within the statute of limitations, unless the member was in arrears for dues when the cause of action arose.

Our defense plan is not entirely a selfish one. We are not defending our members for the sole purpose of giving them defense at cost and dividing that cost among the whole of us. Our plan is an educational one primarily and ultimately. Malpractice suits are altogether too frequent. The law of malpractice is poorly understood by the profession, the laity and the lawyers. The defense is costly and lawyers know that the unprotected doctor will frequently settle rather than stand the expense of suit and the publicity. Too many suits are threatened with no other object but settlement. We aim to teach the law of malpractice and remedy this condition.

By uniting in mutual defense we hope to encourage closer and more brotherly feeling, and by this association better fit ourselves to care for our people. Every malpractice suit brought against any member of our society costs each one of us a certain sum for its defense; every malpractice suit brought against a member is, to the uninformed laity, an unfavorable reflection not only on that member but every one of us who aids directly or indirectly in his defense, whether there are grounds for suit or not. Our defense plan will teach our members what we are required by law and custom to do for our patients.

There are two ways in which we can lessen the number of malpractice cases, an ethical and economic desideratum: First, each one should make himself competent to handle any case he accepts; second, we should so act that we may never be, even unknowingly, the cause of starting a suit against another.

This work of the Michigan State Medical Society (and this same work is being done in over twenty other states), is principally a work of education. It is a practical demonstration of medical ethics.

1. THE JOURNAL M. S. M. S., February, 1912, p. 135.

ERRATA

Printers, as well as editors, sometimes make mistakes. In the February JOURNAL the printer "corrected" two of our "mistakes." Page 127, second column, "editorially" should be "editorial;" page 133, first line, "1912" should be "1911."

THE ETIOLOGY OF ADENOIDS

Aside from the causes of adenoids in children ordinarily given, such as unhygienic sleeping conditions, underfeeding, etc., there are other causes which the writer believes frequently exist. It is a well-known fact, widely published and discussed that adenoids cause mouth-breathing. I have never, however, seen or heard a statement concerning the fact that very often it might be just the other way, namely, that mouth-breathing is the cause of the adenoids.

In my work as medical inspector and examining physician in the public schools of the city of Muskegon, I am more and more impressed with this mouth-breathing in young children as a cause of adenoids. In the very young school children it is noticeable that a very large percentage of them are mouth-breathers. Not the typical "mouth-breather" as this has come to be known in connection with large masses of adenoids in the vault of the pharynx or very large faucial tonsils, or both, but rather the atypical mouth-breather. The child can breathe through the nose if it will, but it simply does not. It has never been taught to do so and perhaps finds it a little easier at times to breathe through the mouth than through the nose. In this way a habit is established, and the child goes on breathing through its mouth more and more. This mouth-breathing causes a high palatal arch, sets up irritation of the mucous membranes of the pharynx with consequent congestion and later fre-

quent inflammations. As a consequence this passes on into a chronic congestion and thickening of the mucous membranes and enlargement of tonsils. The non-aeration of the nasal passages and nasopharynx retards the development of the nasal passages and enhances the growth of the pharyngeal tonsil. Thus is established a vicious circle. Proper instructions given early in the home or in the kindergarten or in very early grades in the school directing the child to a proper use of the nasal passages in breathing would in my opinion avoid a great many cases of adenoids which are brought to a stage where operation is necessary for relief a few years later.

Another factor in the cause of adenoids the writer believes to be that great insidious evil, syphilis, manifesting itself through heredity, possibly in the third or fourth generation. These cases the writer believes to be largely those accompanied by the large lymphatic tonsils and will frequently be seen with the Hutchinson's teeth. Perhaps not the typical Hutchinson's teeth in many cases, but the atypical teeth.

It is stated that in some institutions for the feeble-minded the Wassermann reaction is positive in 20 per cent. of the inmates. Without any definite knowledge that it is true the writer believes that these 20 per cent. will be found to have adenoids or to have had them in childhood or infancy.

The writer has no definite laboratory scientific data on which to base these beliefs but feels justified in advancing them through his convictions arising from extended clinical observations. V. A. C.

IMMIGRATION AND THE INSANE

For a century a stream of immigration directed to the shores of America brought with it the lame, the halt, the blind, the

the leper, the syphilitic, the trachomatous, the imbecile, the insane, the criminal, the anarchist from European countries. When alarm was sounded, about two decades ago, after the discovery that from 50 to 60 per cent. of the insane population in eleemosynary institutions in the United States was of foreign birth, statesmen and legislators very properly cast about for means to stem the tide of degeneracy which such an influx entails. Stringent laws restricting immigration were enacted, and as might have been predicted, the pendulum has swung widely to the extreme of protection. This is especially true as concerns the insane.

The object of such restrictive laws must be first, the protection of the public health; second, the protection of the public pocket book. Insanity notoriously affects the earning capacity of the individual and no question can exist of the beneficent working of any law which hedges about with proper safeguards the admission of those to the United States who would presumably or possibly in time become charges on the public. Unfortunately, however, for those of independent means or wealth, particularly those living on the Canadian or Mexican borders of the United States, no latitude is given to the Department of Commerce and Labor to admit the insane for treatment in this country at private expense.

Section II of the Immigration Laws and Regulations expressly excludes from the United States aliens who are insane, those who have been insane within five years previous to the time of application for entry, and those who have had two or more attacks of insanity: this without reference to the financial ability of the individual or his friends to pay for hospital care, and notwithstanding the fact that the question of public support or safety cannot under the circumstances arise.

Section 26 of the Statute confers on the Secretary of Commerce and Labor discretionary power to admit invalid aliens under bond but excepts aliens with mental defect. He is authorized to admit to hospitals of the United States certain cases of "physical disease" as distinguished from mental, but in the language of an official of the department, the statute seems "to contemplate the absolute exclusion of the mentally afflicted."

In the name of justice, under high heaven why, we may pertinently inquire, may a case of chronic and perhaps incurable rheumatism be admitted for hospital care in the United States and why must a case of insanity due to pre-existing rheumatism be excluded? A case of interstitial nephritis without mental symptoms may be admitted: with mental symptoms must be excluded. What if mental symptoms develop within a week or fortnight in either case? Shall the patient be promptly deported? Why may a woman suffering from a complication of pregnancy for which surgical care is necessary be admitted and why must a case of puerperal insanity be excluded? Why may tabes dorsalis—locomotor ataxia—affecting the spinal cord be admitted and why must an allied condition affecting the brain—paretic dementia—be excluded? Has the old-time absurd impression as to the nature of mental infirmity, that it is something apart from disease in general, to do with such extraordinary legislation? It is high time that the handicap, laid by law on the one hand and superstition on the other, be removed from those to whom the illness, insanity in any form, is a sufficient burden.

Insanity is a physical malady in the sense that its existence implies disorder of a physical organ, the brain. Why look askance at diseases there situated, and frankly on those of related anatomic

organs, the lungs, the heart, the stomach, the kidneys? From a physician's point of view, the admission to the United States of one person suffering from acute venereal infection, displaying no outward and visible signs of illness, is potentially a greater

menace to public health than that of a score of insane patients coming for private hospital care; and such admissions are doubtless of daily, possibly hourly, occurrence at every entry port.

C. B. B.

SOCIETY NEWS

BAY

The annual meeting of the Society was held at the Wenonah Hotel, Monday evening, December 11, 1911,

At 6 o'clock, 37 members and two guests sat down to a splendid dinner, as guests of the president, Dr. R. C. Perkins. After taking their fill of the good things, the members listened to an informal talk on "Fractures," by Dr. E. B. Smith, of Detroit.

The committee having in charge the county poor contract were authorized to go ahead and incorporate the society.

The program committee recommended that the Society hold weekly meetings, and have reviews of leading articles in the prominent medical journals instead of regular papers, every second meeting being devoted to the *Journal of the American Medical Association*.

The recommendations of the committee were adopted.

The question of an annual address by the president was discussed, and the society decided to make this a regular part of the annual meeting.

The following officers were then elected:

President, Dr. J. William Gustin; vice-president, Dr. Floyd H. Randall; secretary-treasurer, Dr. H. N. Bradley; delegate to state society, Dr. R. C. Perkins; alternate, Dr. E. A. Hoyt.

On December 20, at 8:30 p. m., a special meeting of the Society was held in Dr. Baker's office. Mr. Gillett, of Gillett & Clark, attorneys, read articles of incorporation for the Society, as prepared by him. The articles were then accepted as read, and all members present attached their signatures thereto. Mr. Gillett then took charge of the articles to have them properly recorded.

A number of interesting cases were reported at the meeting of January 15. Dr. W. R. Ballard reported a case of retroperitoneal

hernia with appendicitis and two obstetrical cases, one of contracted pelvis, in which he did a cesarean section with good results; the second a difficult case, in which section should have been done but was not. The latter had a much more difficult time, and the baby was dead. In the former, both mother and baby came out nicely.

Dr. Hoyt and Dr. Hauxhurst each reported a fatal case of eclampsia, the latter being one he saw in consultation.

Dr. Tupper reported a case which showed symptoms of obstruction, but refused operation for some time. Finally, at operation, the case showed a circumscribed cancer closing up the sigmoid. No symptoms had ever been noticed up to this attack.

Dr. Herrick reported a case of convulsions in a woman of 74.

Dr. Mary Williams reported a case of pregnancy and confinement going on uneventfully in spite of the fact that the urine boiled practically solid with albumin.

Dr. Tupper reported a case of cure of chronic Bright's disease following pregnancy.

President J. William Gustin then made some remarks relative to the general welfare of the society, urging members to be extremely careful in the treatment of brother members of the society and others. He hoped there would be no "sore spots" in any member this year.

The president's annual address was then read by retiring President Dr. R. C. Perkins. Following this, Dr. J. W. Hauxhurst read a review of a monograph on "Typhoid Vaccination in the Army."

President's Annual Address

(Abstract)

The doctor did not receive notice, and was not prepared for an address at the annual meeting, but thinks that, as the custom prevails in other societies, we should fall in line. During seven years' membership in the Society.

the doctor has been secretary two years; vice-president two years, and president one year, and thanks the society for honors shown him.

The membership has increased during the past seven years, and interest is growing in society as well as public health matters. Medical inspection of schools has been started during the past year, and the work will no doubt proceed as planned, in spite of difficulties which have arisen.

The Civic League has been assisted in free dispensary work, and much good accomplished in that way.

Three unsuccessful attempts to obtain the contract to care for part of the county poor shows that we lack politicians in the society. We have some members more or less skilled in the art, and one or two changes on the poor board would help to simplify matters. It is hoped that efforts will be renewed in the fall.

A home for the society is greatly needed. Present dues preclude the buying of a building. (Will some of our wealthy members take notice?) Suitable rooms might be rented. The matter should be considered during the year. A library would naturally follow the securing of a home.

The *Bulletin* has been established on a pretty good footing. All the work has fallen on the secretary, and in the future, assistants should divide up the work.

In the Hospital Training Schools we have attempted to give more thorough courses to the nurses and secure more system in the curriculum with some success. A committee has been recently appointed to arrange with the hospital management for a higher standard of education in applicants for the training schools.

The practice of medicine is gradually undergoing a change, and we are entering upon an era of remarkable changes along certain lines. The widening field of vaccine therapy is opening, and we are realizing the part played by the internal secretions in health and disease.

The programs as planned for the year ought to keep us abreast of the times, and be the best we have yet had. Every member should do his best to make them a success.

Any criticism that the course of the Society has been directed by a few is unfounded. The work has been carried on by those most interested and with no selfish motive. Let us continue to keep up our standard and standing as one of the best county societies in the state.

Secretary's Annual Report

Your secretary started the year with great ideals for building up the society, but is unable to report the growth which was hoped for; however the enrollment will show a net increase during the past year.

At the close of last year, the number of active members was forty-seven. We have lost one member by death, and gained four, making the present membership fifty, a net gain of three over last year. We have two honorary members. Total fifty-two.

Fifteen meetings have been held and fourteen papers read. The average attendance has been seventeen.

Of the present membership, eleven have not been present at a meeting. Two members have been present at every meeting this year. Two have missed but one, and seven have been present at ten or more.

The programs during the year have been general in character as last year, consisting of one paper and the discussion for one evening. Three guests from out of the city have read papers. On March 27, Dr. E. B. Pierce, of Howell, read a paper on "The State Sanitarium at Howell." At this time the meeting was held at the Wenonah Hotel, a banquet preceding the paper. On October 24, the meeting was held at the National Guard Armory, at which time Dr. W. T. Dodge, of Big Rapids, read a paper on "Vaccine Therapy." This evening we have with us Dr. E. B. Smith, of Detroit, who will give us a talk on "Fractures."

The society has this year taken up medical inspection of schools, and through a committee has inaugurated a system which will be tried for a year at least.

During the year the Society and profession of the city lost one of its oldest and most respected members. Dr. Isaac E. Randall died on January 20 of erysipelas after an illness of one week.

By a vote of the Society, the office of secretary and treasurer was combined, the by-laws being amended accordingly. The by-laws were also amended to make any legally registered physician eligible to membership, omitting the words "practicing non-sectarian medicine."

Eight numbers of the *Bulletin* have been issued during the year.

We should not forget that there are many eligible physicians in Bay, Arenac and Iosco counties who are not enrolled in our Society. They should be put on the rolls next year.

H. N. BRADLEY, Secretary.

BERRIEN

Berrien County Medical Society met at Library Hall, Benton Harbor, Thursday, February 8. A paper presented by Dr. Penoyer of South Haven on "Treatment of Typhoid Fever," based on 400 cases occurring in South Haven epidemics, was highly appreciated by all and led to some very interesting discussion. Dr. Penoyer laid special emphasis on "ice water injections into colon in extreme temperatures that were not reduced by bath and cold packs applied externally," and cited several cases treated in that way with gratifying results.

Dr. A. H. Andrews of Chicago presented a paper on "Trifacial Reflexes." This paper, presented in the doctor's pleasant, convincing way, was full of meat and emphasized the necessity of getting at the cause of obscure symptoms which might be produced by disease along the course of this nerve of many functions and wide distribution. There were twenty-four physicians present.

H. G. BARTLETT, Secretary.

Berrien County Medical Society met at Hotel Whitcomb. It being the regular annual meeting, reports were read by the secretary and treasurer which showed the society to be in a healthy, but somewhat comatose, condition. Election of officers followed and the following were elected:

President, Dr. L. A. King, Baroda.

Vice-president, Dr. N. A. Herring, Benton Harbor.

Secretary, Dr. Henry G. Bartlett, St. Joseph.

Delegate, Dr. Edward J. Witt, St. Joseph.

Alternate, Dr. F. M. Kerry, Benton Harbor.

Member medico-legal committee, Dr. W. L. Wilson, St. Joseph.

After a six-course dinner, the meeting was called to order by Vice-President Dr. N. A. Herring, who introduced State Secretary Dr. Wilfrid Haughey and Dr. Rockwell, councilor for this district, as speakers of the evening. Dr. Haughey made a strong appeal to the profession for closer union all along the line, explaining the medical defense and plans for the state journal for the future. Dr. Rockwell also spoke along the same line and the establishment of a greater fraternal spirit among medical men. Six new members were elected.

Adjourned to meet the second Thursday of each month during the year.

H. G. BARTLETT, Secretary.

BRANCH

At the annual meeting of the Branch County Medical Society, held Jan. 16, 1912, the dentists of the county were invited to participate in the program. We had an excellent meeting, good program and good attendance. About every dentist in the county was present. After the business meeting the following officers for the year 1912 were elected:

President, Dr. W. H. Baldwin, Coldwater.

Vice-president, Dr. Bert Culver, Coldwater.

Secretary-treasurer, Dr. Samuel Schultz, Coldwater.

Member of medico-legal committee, Dr. H. W. Whitmore, Quincy.

The following program was then carried out:

"Cooperation Between Physicians and Dentists," W. A. Griffith, M.D., Coldwater.

Discussion led by W. D. Campbell, D.D.S., Quincy, and C. C. Sears, M.D., Quincy.

"Oral Evidences of Disease," E. A. Cook, D.D.S., Coldwater.

Discussion led by P. H. Gunsaulus, M.D., and E. W. Ryan, D.D.S., Bronson.

"Responsibilities of a Physician from a Dentist's Standpoint," G. S. Hadley, D.D.S., Coldwater.

Discussion led by A. G. Holbrook, M.D., and N. E. Phelps, D.D.S., Coldwater.

"Anesthesia, Local and General," Ray Whitmore, M.D., Quincy.

Discussion led by R. E. Patterson, D.D.S., Coldwater, and E. E. Hancock, M.D., Girard.

No special mention can be made of any particular paper, as they were all good and every one present took part in the discussions.

S. SCHULTZ, Secretary.

GRAND TRAVERSE

The regular monthly meeting of the Grand Traverse-Leelanaw County Medical Society was held at the home of Dr. G. M. Johnson on the evening of January 16. The minutes of the last meeting were read and approved. Dr. J. M. Wilhelm gave a report of the program committee, outlining the program for the ensuing year.

Two letters were read from the public health committee. It was decided to appoint three members for the local public health committee.

Dr. Sara Chase read a paper on "Spondylotherapy," followed by a general discussion.

Dr. O. Chase gave a talk on his recent visit to Rochester, Minn.

The chairman appointed a committee to investigate a hospital, to report at the next meeting. After the meeting adjourned, Dr. Johnson invited the members to the dining room, where an elaborate luncheon was served.

R. E. WELLS, Secretary.

The regular monthly meeting of the Grand Traverse-Leelanaw County Medical Society was held on the evening of February 6, in Dr. Lawton's office. Thirteen members were present. Minutes of the last meeting were read and approved. Dr. R. Bailey of Traverse City was admitted to membership. It was decided to try to procure a speaker from one of the adjoining states to give a public lecture on some public health question.

A motion was passed to the effect that the Society requests the board of health of Traverse City to ask that the ice which is being cut on Grand Traverse Bay be examined to ascertain if it is safe for domestic use. Dr. Thurtell gave a talk on "Malignant Edema." Drs. Gauntlett and Lawton each presented interesting cases, one being a case of situs transversus. The meeting adjourned to meet at Dr. Thurtell's office next month.

R. E. WELLS, Secretary.

INGHAM

Jan. 11, 1912. Dr. P. J. Livingstone of Detroit presented a very interesting paper on

Ocular Disorders as Symptoms of Systemic Disease

which was very ably discussed by Drs. L. W. Toles, A. E. Owen, H. S. Bartholomew and Samuel Osborn. This paper was meant for the general practitioner and emphasized the fact that many ocular disorders, particularly eye-strain accompanying headache, are not so constantly as is commonly thought the result of errors of refraction but, on the contrary, it is very commonly only the end-symptom of a remote toxemia, and in this connection he pointed out how readily one could understand why remote toxemias might demonstrate their end-results in the ocular structures when one remembers the close anatomical and embryological relation of the eye to the brain, which organ he classified as a highly sensitized end-organ of the brain.

He further laid particular stress upon the necessity for ocular examination as an aid to diagnosis in many remote disorders, particularly those involving the cardiovascular system, and cited several cases which demonstrated the early detection of nephritis and other cardiovascular complications by examination of the fundus oculi.

Jan. 26, 1912. Dr. C. V. Russell of Lansing addressed the Society on the subject of

Saturated Solution of Epsom Salts in the Treatment of Pus Infections

He reported a number of cases in which this treatment had been used in the form of wet hot dressings and in the irrigation of pus cavities and infected uteri with considerable success and advised further trial of the method. He said the principle of treatment was based on osmotic action of Mag. Sulph. solution and selective action of the tissue cells by which Mag. Sulph. is rejected and a stream of lymph is withdrawn from the infected tissues, thus preventing absorption of toxic material. He stated that capillary action of wet dressings was increased by concentrated solutions, that granulation tissue was not retarded or destroyed by the action of concentration of Mag. Sulph. and that such solution was antiseptic because of concentration and high density.

Jan. 30, 1912. Dr. R. E. Miller read a paper on "Ectopic Pregnancy," which was thoroughly discussed by Drs. A. D. Hagadorn, J. G. Rulison, G. F. Bauch, L. W. Toles and C. V. Russell.

At the last meeting of the Supervisors of Ingham County it was recommended that \$6,000 be appropriated for a tuberculosis sanatorium. Of this amount Ingham County is to give \$4,000 and the City of Lansing \$2,000. This action was obtained largely through the efforts of Dr. L. W. Toles and will be submitted for popular vote at the spring election. The president of Ingham County Medical Society, Dr. Bret Nottingham, in a communication to the Society says, "This is a matter in which we as a Society should take an active interest and by means of public meetings and other legitimate forms of persuasion endeavor to secure as favorable a vote on this proposition as possible. I have therefore considered it advisable to appoint a special committee to have charge of the tubercular campaign in this county, with power to

act for this Society, and have named upon that committee Drs. L. W. Toles, O. H. Bruegel and S. H. Culver." This communication was unanimously approved by the members present.

M. L. HOLM, Secretary.

KALAMAZOO

Jan. 10, 1912. Dr. J. T. Geraghty, of Baltimore, gave a clinic and read a paper on

The Value of Cryoscopy in Kidney Conditions (Abstract)

The estimation of renal function can be determined by specific gravity tests, cryoscopy and the time of elimination of dye substances. Cryoscopy is an elaborate method, and the results are about the same as the older specific gravity tests.

Of the several different dye substances used for the elimination test, phenolsulphonaphthalein is believed, by Dr. Rowntree and myself, to be the best. This is a reddish powder similar to phenolphthalein. It can not be precipitated. It is rapidly excreted, 50 per cent. being recovered in fifty minutes.

In chronic nephritis, functional tests have failed, since phthalein tests show only tubular activity rather than glomerular. Lactose, on the other hand, is secreted by the glomeruli. If phthalein is not eliminated in one or two hours, the patient can live but a short time. In interstitial nephritis, the test works well, as we have shown by a case where ordinary urinalysis showed normal urine, but the functional test showed much delay in excretion. The patient died soon, and a post-mortem showed marked findings of interstitial nephritis.

In surgical cases, the test is most valuable, and especially cases of obstruction as in enlarged prostates. The retention lowers the functional activity, although the other tests will be normal. In 200 cases of enlarged prostate the test has proven its value in all.

All tests for functional activity have been used in unilateral disease by catheterizing the ureters. Simple palpation cannot determine the condition of a kidney, even though the hand is in the abdomen. In cases where but one ureter can be catheterized, the other side can be allowed to run across the bladder. If one side is diseased, the well side will overfunctionate so that the combined activities of the

two may be that of two normal kidneys. If both are diseased, there will be decreased function.

In tuberculosis of the kidney, one kidney only is usually primary. If the second kidney is involved later, it ordinarily does not come by extension from the first, but through the blood. Clear urine may come from diseased kidney, and cloudy urine from a healthy one; e. g. hypernephroma and localized tuberculosis. An infected kidney will show retarded function.

In employing this test, six milligrams of the dye are put into one c.c. of normal salt solution, and injected into the lumbar muscles. Dye appears in urine in ten minutes. The urine is then collected for one hour, by catheter or voiding. Fifty per cent. should be recovered in one hour. At the end of the hour the urine is diluted to one liter, and compared to standards in colorimeter. A quantitative test may thus be made with ease and accuracy.

This test shows impending uremia, and is of more value than those for specific gravity, albumin, urea, etc., as ordinarily employed. Catheterization of ureters is unnecessary except in unilateral cases. The drug is stable, not changed by heat, and can be bought ready for use, in ampules.

C. E. BOYS, Secretary.

MUSKEGON-OCEANA

Regular meeting of the Muskegon-Oceana County Medical Society was held Friday evening, Jan. 26, 1912, at 8:30 p. m., at the residence of Dr. R. G. Olson at Muskegon Heights. Members present: Drs. Geo. S. Williams, I. M. J. Hotvedt, W. P. Gamber, W. A. Campbell, Jacob Oosting, J. T. Cramer, A. A. Smith, R. G. Olson, F. B. Marshall, P. J. Sullivan, R. I. Bussard, Alfred Brocke, and V. A. Chapman.

Communications were read from Dr. Dixon, secretary of Michigan State Board of Health regarding the doing of the Wassermann reaction at the State Laboratory free to physicians of Michigan.

A communication was read from Dr. N. DeHaas of Fremont requesting that he may be permitted to become a member of this society and given the privilege of paying local dues.

It was moved, seconded and carried that Dr. DeHaas be extended an invitation to join this society.

Dr. Campbell moved, Dr. Olson seconded that in view of the fact that Dr. DeHaas is already

a member in good standing of the Newaygo County Medical Society and Michigan State Medical Society, the regular order for application and election for membership be suspended and Dr. DeHaas be immediately elected to membership. Carried unanimously.

After some discussion concerning the hospital for tuberculosis cases which the city council proposes to erect, the following resolution was offered by Dr. A. A. Smith and carried:

Resolved, That the Muskegon-Oceana County Medical Society commends the action of the council of the City of Muskegon in any steps it may take to establish a hospital for the housing, treatment and relief of persons afflicted with tuberculosis.

Meeting adjourned to luncheon.

V. A. CHAPMAN, Secretary.

LENAWEE COUNTY

Lenawee County Medical Society held its February meeting at Adrian. There was a good attendance. The Quiz Master, Dr. Andrews had his hands full in finding questions that could not be answered. To all the doctors that were absent take this notice: Look up your A. M. A. *Journal* for February and come loaded as Dr. Seager is the next Quiz Master. In addition to the Quiz there were a number of Clinical cases. Dr. McKenzie demonstrated the x-ray on a case of supposed fracture.

I. L. SPALDING, Secretary.

O. M. C. O. R. O.

At a meeting of the O. M. C. O. R. O. Medical Society held at West Branch, Jan. 17, 1912, A. C. MacKinnon of Lewiston was elected president, E. G. Abbott of Sterling vice-president, and R. J. Beeby of West Branch secretary-treasurer. We will hold six meetings this year, alternating between Grayling, Gaylord and West Branch.

R. J. BEEBY, Secretary.

ST. JOSEPH

Our County Medical Society met at Three Rivers, Jan. 6, 1912, as per call at 12:30. The Three Rivers doctors conducted those "out of town" to the dining room of the Central Hotel where each one demonstrated that at the table of his good wife he had learned to be a workman of skill. There were several splendid talks

given on assigned subjects. But had a visitor dropped in he might have concluded it was simply a friendly professional visit and interchange of thought with report of cases. No good political gossip or presidential speculations (after dinner), just a heart-to-heart interchange of professional thoughts. Seldom has more interest or earnestness been shown in a similar meeting.

T. D. Givan was re-elected president; R. E. Dean, Three Rivers, vice-president; S. R. Robinson, reelected, secretary-treasurer. W. A. Royer was elected state delegate, J. R. Williams was elected alternate.

S. R. ROBINSON, Secretary.

WAYNE

At the meeting of the Medical Section on Jan. 15, 1912, Dr. Thaddeus Walker read a paper entitled, "Fees for Clinical Laboratory Examination," and Dr. Joseph Sill read a paper entitled, "The Limitations of Clinical Laboratory Methods." Both papers were of exceeding interest to every up-to-date practicing physician. The discussion, which was participated in by Drs. C. G. Jennings, E. M. Houghton, A. P. Ohlmacher, W. F. Metcalf, V. C. Vaughn, Jr., and R. G. Owen, was to the point, and served to bring to light many angles of the present day cost of practicing modern medicine.

The regular chairman and secretary of the Section, Dr. James Cleland, Jr., and Dr. R. L. Clark, presided.

Fifty-three members were present.

Fees for Clinical Laboratory Examinations Dr. Thaddeus Walker

Dr. Walker's paper was a plea for more uniform laboratory fees throughout the country. He outlined a hypothetical laboratory, showing the cost of investment, with yearly maintenance. The probable number of specimens examined, that is, the capacity of the laboratory was shown, and the time for the work was divided into units. A tabulation of expenses showed the different items involved and their cost per specimen, which would be nearly one dollar, exclusive of salaries of the staff for time devoted to the work. He argued that fees should be based upon the units of time required for the different examinations and that the minimum fee charged for one unit could not be less than \$2.00 and permit the staff a fair income.

Dr. Walker also appealed to the physician to know the cost per patient of his practice, and expressed a desire to aid any one who wished to determine this cost, which should not be confused with revenue from practice, but the actual cost of seeing patients of different classes.

The Limitations of Clinical Laboratory Methods Dr. Joseph Sill

Dr. Joseph Sill in his paper, said that the attitude of the clinician toward the clinical laboratory is faulty, due to extravagant claims on the part of the laboratorian, and disappointment that expectations based on such claims cannot be realized by the physician. The clinical laboratory cannot alone make diagnoses for the physician, but can and should furnish data, obtainable in no other way, for the clinician to use in making his own diagnosis. The clinical laboratory should not be expected to deal with general principles of service, but should apply these general principles to special diagnostic problems. To that end the clinician should furnish the laboratorian with all available data regarding the patient for whom the examination is made. Frequent consultations of the clinician and the laboratorian are valuable to both. The clinician should not be ashamed to admit unfamiliarity with laboratory methods—he should remember that this is an age of specialism, and that the laboratory man forgoes the opportunity to learn many things with which the clinician is familiar, because he is learning a few things the clinician cannot spare time to become familiar with. The solution of the problem is full and free confidence between clinician and laboratorian.

At the general meeting of the society on Jan. 22, 1912, Prof. Grover W. Wende of Buffalo gave a lecture with lantern slide demonstration of "Some Diseases of the Skin." The lecture was highly scientific and the demonstration unusually good. He covered the more common diseases of the skin, though at the close he showed some of the rarer forms. Professor Wende spoke somewhat pathologically at times, showing the modern trend of medicine to this side. Perhaps the field of dermatology is the last to be invaded by the pathologist and already the results gained give promise of greater results to follow. One notices today that the teacher or specialist must combine the clinical as well as the pathological to hold his own.

The following names having been favorably acted upon by the board of directors, were elected to membership:

Mason W. Gray, University of Michigan, 1880, of Pontiac and Mr. Jacob S. Blitz of Detroit to associate membership.

Jean A. Vernier of Detroit reinstated.

M. S. Dubpernell, University of Louisville, 1909, of Detroit, to active membership.

A communication from Major F. M. Hartsock, relative to a symposium on military medicine as a program in the near future, was presented by Dr. Carstens.

President H. O. Walker and the new secretary, Ernest K. Cullen, presided.

One hundred and twelve members were present.

The board of directors has chosen Dr. Ernest K. Cullen to act as secretary pro tempore in the place of Dr. R. C. Jamieson, whose illness has prevented him from performing his duties for some time. Dr. Jamieson expects to spend some time in travel abroad and his continued absence made the choice of some one to fill his place imperative. Up to the present time Miss Jane A. White, the librarian, has very efficiently filled his place.

ROLLAND PARMETER, Correspondent.

At the meeting of the Surgical Section on Jan. 29, 1912, Professor Joseph Jastrow, of the University of Wisconsin, gave a delightful talk upon "The Subconscious and Some Phases of Mental Healing." Dr. Jastrow spoke without notes and kept his audience on the alert every moment. He presented specific instances and drew conclusions with such syllogistic exactness that he kept his audience in no doubt of the point he wished to drive home. The Society is a large debtor to Dr. B. R. Shurly, whose guest Dr. Jastrow was, and through whose efforts the Program Committee were able to present him.

Drs. Alexander W. Blain and J. H. Dempster acted as chairman and secretary pro tempore, respectively.

One hundred and ten members were present.

The Subconscious and Some Phases of Mental Healing

By Joseph Jastrow, Ph.D.
(Abstract)

It has been said that wherever three doctors met, two were atheists. The speaker would alter the saying to, where three physicians meet, two of them will be found to be psychol-

ogists. He felt that in this visit from a member of one profession to another, he, the visitor, reaped the greater benefit. Such visits effected an interchange of points of view. The psychologist was indebted to the physician for the clinical view of the problems of mind.

The medicine man of former times was a psychological medicine man. The "ministering to a mind diseased," did not mean that the body only got out of gear. There was a book written on the subject,—Why the Mind Has a Body. One might write with equal propriety on a subject,—Why the Body Has a Mind,—inasmuch as both subjects are equally absurd. Both body and mind are it, continued the speaker. Subconsciousness was a term which enabled us to point to a center of interest. No function could exist in a biological sense except it were developed out of a long standing relation of organism to environment. A study of normal function was necessary to a proper understanding of the abnormal. Every one had a large number of functions that were understudies, our habits, for instance, were understudies. What the lecturer termed subconscious facilitation was taken as the starting point; subconscious facilities were our habits. We had frequently heard the remark, "Do only one thing at a time," but the only sound advice was, "Do many things at a time." We were as a matter of fact doing a great many things at a time. "When I mis-speak myself," said the speaker, "I do so because I am directing less attention to my words and more to my thought." This subconscious understudy enabled one to wind his watch while he was dressing for dinner. It was commonly called absentmindedness, inasmuch as intention and execution were not coapted. Absentmindedness suggested how habits were formed. We were all constantly changing habits and people who were absentminded were so temperamentally and were apt to have frequent lapses.

We measured absentmindedness by the degree of absorption. The speaker went on to illustrate. A student of psychology had been accustomed to write with his inkstand in a certain position on his desk;; for the sake of self-study he placed it in a different location and noted the number of times he unconsciously reached for the ink in its former place. Another illustrative instance was writing the old

year in dating letters after the beginning of the New Year.

The more interested a person was in his work, the more frequent were such mistakes until a new habit was formed. We were continually breaking up old habits and forming new. The formation of new habits constituted the beginning of subconscious facilitation, which enabled us to do a large number of little things without much attention.

A large number of functions were performed by a minimum of attention, for example, swallowing; when a patient choked in the act of swallowing a pill, it is because he used his cerebrum rather than his medulla. The condition was one of a faulty distribution of consciousness. We could do wonderful things without the will asserting itself.

We had many muscles which in the evolutionary process have become apparently functionless; such we did not use for action, as our ancestors did. These muscles were, with us, largely muscles of expression. We were unable to command them voluntarily. There was, for instance, a real difference between the stage laugh and a real hearty facial response to some humorous situation, and stage tears and tears inspired by grief. There was too much consciousness about the former. All forms of affectation appeared false, owing to the lack of balance between conscious intent and the subconscious.

The temperamental phrase was strong with the individual man. Shyness, for instance, was described as a widely disseminated form common to all humanity. It was that peculiar form of fear provoked by social surroundings, —a protective reaction against the strain. Shyness is responsible for a great deal of mental misery. In the abnormal development of shyness we had a psychopathic condition. Shyness was described as the pangs of an "ingrowing mind." Frequently in children we had unhampered freedom, to be followed later in life by a period of shyness. The set of involuntary actions were lost and had to be reacquired. Human instincts were more complicated and numerous than animal instincts. With man the relation between the conscious and the subconscious were often in conflict, and it was the conflict phase we were to look to for further light.

If one were asked to define the word "thinking," he would have a difficult task before him. We have no opposite to "think-

ing." It was like the main street of a town; it did not require a name. Wundt, on being questioned about the significance of the term "thinking," replied that no animals and very few men were addicted to thinking. "If there be any opposite for thinking," continued the speaker, "it is 'dreaming.'" Drifting away from thinking was getting into the land of dreams. Those which came to us during sleep were the great reservoirs of a subconsciousness. Day dreams were called reveries. From the beginning, people had a longing for another world, different from the world of thought, to attain which resort was had to such drugs as "Hashish," "opium," and so on. Since dreaming was the natural condition, the question pressing itself for answer was how we ever came to think. We had, in dreaming and thinking, a contrast that offered a point of analysis. What was it that the mind possessed when it dreamed that it had not been awake? Dreaming was defined as already half-waking. Waking, as contrasted with dreaming, was characterized by (1) Incorporation: When one awakened, he incorporated the world without. A sense bombardment began, or in other words, we began to react to our surroundings. (2) Men dreamed always in terms of their past selves. Awakening meant orientation. We realized who we were. (3) In waking we exercise our own initiative. On taking ether, a person lost all three at once, and in regaining consciousness initiative came a little later. The above conditions were designated normal. The abnormal state consisted in the resumption of any one of the three without the others. Such a disturbance in mind was called an illusion, or an hallucination. Dr. Jastrow went on to describe hysterical anesthesia and psychical anesthesia, illustrating the conditions by the patient's inability to recognize, under suggestion, certain letters in a word or phrase, while at the same time recognizing the positions where such letters belonged, or, a man under the impression that he had forgotten his watch taking out his timepiece to see if he had sufficient time to go home after it. In hysterical anesthesia we had certain areas dropped out of consciousness.

Somnambulism was strange inasmuch as it was initiative selectively resumed. Shakespeare was correct in his representation of Lady Macbeth, who, in her sleep, saw only that on which she was bent. She was able to

move about in her sleep without burning herself with the candle. Somnambulism represented the resumption of the initiative before the first two characteristics of wakefulness as opposed to dreaming. The somnambulist was able to control his muscles, or, in other words, to exercise the initiative which, under normal conditions, was the culmination of the waking act.

Speaking of the nature of personality, Dr. Jastrow went on to state that personality was an achievement—a normal and natural one, but one we had to fight for. Freud had come to that conclusion from his study of dreams and hysteria. We had to suppress unbidden thoughts. The speaker went on to explain that we were continually expressing thoughts, that one's speech would be a perfect bable if he uttered the thoughts as they arose in his mind. Then, in regard to being susceptible to suggestion, such a thing was impossible while man was in a critical mood. We must first be uncritical before we can respond to suggestion. The hypnotist, the speaker went on to say, took advantage of this condition by diverting the attention of his subject before he began to suggest. In our dreams we were not critical; all that glittered was gold; in our waking moments we would take the putative gold to the metallurgist for an assay. It was the constant fight between the genuine and the imitation that kept up the critical faculty.

Childhood was not critical, and did not demand the true, hence the absurdity of the position of those who would insist on filling the child-mind with the bald truth. It was a fact that we had to assume the critical faculty to preserve our own personality, yet the person who had some vent or outlet for his personality was the safer one. Greek tragedy was a means of vicariously accomplishing this end. While suppression of the numerous thoughts and emotions that flood the mind was necessary to the preservation of one's personality, it was a mistake to suppress too much.

The lecturer concluded by reference to the psycho-therapeutics of the confessional of the Roman Catholic Church. The analysis of the conscious and subconscious states afforded a field for serious study for both psychologist and physician.

ROLLAND PARMETER, Reporter.

MICHIGAN HEALTH OFFICERS ASSOCIATION

The Michigan Health Officers convention was held at Ann Arbor Jan. 30 and 31, 1912.

Dr. V. C. Vaughan, president of the State Board of Health, presided over all sessions. The opening address was given by Hon. Wm. Walz, Mayor of Ann Arbor. In addition to welcoming, formally, the Health Officers he expressed his appreciation, as a layman of the work which the Public Health Departments are accomplishing.

Dr. Vaughan presented a paper on the "Michigan Method of Water Analysis," covering rather completely the twenty-four years of experience with this method. His paper was discussed by Drs. Holm, Inches, and Hayward.

Dr. Ralph Apter of Grand Rapids presented a very urgent plea for a State Hospital for advanced cases of tuberculosis. He pointed out very definitely the impracticability of taking these cases to the Howell Sanatorium, and showed the importance of having definite provisions made for the care of these cases. His paper was discussed by Drs. Fisher, Kiefer, Vaughan and others.

Professor Gardner Williams gave a very interesting and instructive paper on the subject of "Water Purification." He traced the history of this sanitary principle from its beginning, and discussed the various methods now in vogue with respect to the impracticability and efficiency. Drs. Kiefer, Coté and others discussed the paper.

At the evening session Dr. Novy gave a talk on the subject of "Disease Carriers." He emphasized the importance of giving a more definite consideration to this subject in relation to the prevention of the spreading of diseases.

Following Dr. Novy's lecture, Dr. Warthin gave an illustrated talk on the subject of "Occupational Diseases." He reviewed, somewhat, the work which has been done in other states in the way of investigation of occupational diseases and emphasized the importance of such an investigation in Michigan. The evening papers were discussed generally.

At the Wednesday forenoon session Mr. J. A. Hach, chairman of the Legislative Committee of the United Commercial Travelers Association, read an interesting paper on the subject of Hotel Sanitation. Mr. Hach emphasized the fact that the various boards of health have an opportunity to serve the public by requiring more consistent sanitary principles in hotels

and on railroad trains. Mr. Hach advocated the abolishment of the roller towel particularly.

The chief propositions involved in the Medical Milk Commission law were discussed and explained by Dr. Kiefer of Detroit. Following Dr. Kiefer's paper several of the health officers who had, apparently, not fully understood the details of the law expressed their intention to try to effect an organization of a Medical Milk Commission in their jurisdictions.

Dr. Koon read a very interesting paper on the subject of "Garbage Disposal." He outlined the method in vogue in Grand Rapids and was able to emphasize the efficiency of the service, also the relatively small expense to the community. His paper was subjected to much general discussion, lead by Drs. Powers and Zudrawski.

At the Wednesday afternoon session Miss Adele McKinnie read a paper entitled "Eugenics Work in Michigan." This paper was one of the most interesting ones presented and manifested a great deal of tact and ability on the part of the writer. Miss McKinnie is now conducting, under the direction of the Michigan State Board of Health, a six months' study of this subject in Michigan. Her paper was illustrated by charts and was discussed by Drs. Barrett, Huber, Warthin and Prof. Shull.

A paper entitled "The Smallpox Situation," was presented by Dr. Alger. The trend of this paper was to emphasize the importance of vaccination as a preventive measure. During the discussion of this paper, it developed that the majority of the health officers were in favor of a compulsory vaccination law.

"The Control of Typhoid Fever," was presented in a paper by Dr. Slemons. This paper emphasized the importance of physicians reporting all cases promptly to the local health officer.

All papers were subject to general discussion and the extent to which health officers entered into these discussions showed the high degree of interest maintained.

Probably the most important transaction of the convention was the organization of the Michigan Health Officers Association. This association will meet at Ann Arbor some time in May or June, the exact time to be determined by the State Board of Health. The slogan of the association is to be "general cooperation in the interest of public health." In order to provide plans for perfecting the

organization of the health officers the following officers were elected, and were instructed to prepare rules and regulations, etc., to be submitted at the forthcoming convention: Dr. Guy L. Kiefer, president; Dr. R. L. Dixon, secretary; Dr. T. J. Langlois, Dr. T. M. Koon, Dr. A. F. Fisher and Dr. Edward Goodwin, vice-presidents.

R. L. DIXON, Secretary.

THE ASSOCIATION OF RESIDENT PHYSICIANS OF ST. MARY'S HOSPITAL

On Saturday evening, January 20, the Association of Resident Physicians of St. Mary's Hospital met at the Wayne County Medical Building, 33 High Street E. The meeting was well attended and judging from the enthusiasm shown this association bids fair to become prominent in the medical affairs of the community.

Dr. F. B. Tibbals, in an interesting and concise manner, presented the subject of "The Treatment of Trifacial Neuralgia with Deep Alcoholic Injections," and Dr. William M. Donald, in a short talk on "Some Problems in Dietetics," brought out some very instructive features in carbohydrate, fat, and proteid feeding.

The officers for the coming year are: president, Dr. H. Wellington Yates; vice-president, Dr. Charles McLean; secretary, Dr. R. C. Andries; treasurer, Dr. F. E. Pilcher.

Dr. Howard Coll, who has just completed his internship at St. Mary's Hospital, was admitted to membership.

R. C. ANDRIES, Secretary.

DETROIT OTO-LARYNGOLOGICAL SOCIETY

At the meeting of the Detroit Oto-Laryngological Society, Jan. 16, 1912, Dr. Harold Wilson read a paper on "Some Aspects of the Mastoid Operation," and Dr. Emil Amberg read a paper on "Why the Practice of the Specialties Should be Controlled."

Some Aspects of the Mastoid Operation

Dr. Harold Wilson

(Abstract)

As a matter of curious interest the case-record of the first case occurring in his practice was given. The case was one of spontaneously perforating mastoid abscess, with the formation of subperiosteal abscess. The operation consisted in a curettement with the subsequent

packing of the wound with cotton—cure followed. This was in 1889, and was noted to emphasize the great change in the technic of the mastoid operation since that time. The subject was considered under several heads.

Diagnosis—It was noted that no absolutely diagnostic signs exist which singly make the operation imperative, and that the necessity for surgical intervention is determined by the particular complex of symptoms existing in the individual patient. Cases were related to show the insufficiency of single symptoms, such as pain, tenderness, swelling and sagging of the posterior canal wall.

From a year's experience in the use of gas-oxygen anesthesia the speaker was highly favorable to its use in all otherwise suitable cases.

Preparation of Field—The use of soap, alcohol and ether was commended. A gauze strip about an inch wide fastened along the posterior border of the field by means of collodion holds the hairs fast and keeps them completely out of the way. A most satisfactory way of delineating and protecting the operative field was shown, involving the use of a bandage and two towels.

Incision—Contrary to the classic advice, the writer urged the more gradual and cautious incision of the skin, especially in children, where a thin, soft cortex or dehiscences would make a deep, rapid incision dangerous.

Opening the Bone—The antrum is not usually sought for and entered as the first step, but rather after the larger part of the bone has been removed. In this way, there is less danger to the sinus and an easier, more open field for operation.

Closure of Wound—The immediate closure of the upper two-thirds or more of the wound in most cases hastens recovery and minimizes deformity. A short perineorrhaphy needle has been found to be most satisfactory for placing the sutures, which include the entire thickness of the flaps.

Why the Practice of the Specialties Should Be Controlled

(Abstract)

Dr. Emil Amberg

At the present time anybody who chooses to call himself a specialist may do so. The only restriction lies in the character of the individual. This fact includes a high tribute to the integrity of the specialist, and from the standpoint of individualism this condition

represents the highest type of development. From the standpoint of a regulated and governed community, it represents anarchy, as defined by Webster.

We are confronted with the question, to what extent the supervision of the state is applied to the practice of the specialists. The answer is as simple as it is dumbfounding. At present no evidence of knowledge and fitness is required. The specialists must receive their training in hospitals, either as assistants or in similar positions. The answer received from a number of specialists by the writer express the opinion that steps should be taken aiming at the regulation of the practice of the specialties.

RED CROSS ANNOUNCEMENT

The American Red Cross desires again to invite attention to the exhibition in connection with the Ninth International Red Cross Conference, which will be held in Washington, D. C., from May 7 to 17, 1912.

The exhibition will be divided into two sections, which will be styled "Marie Feodorovna" and "General." The former is a prize competition, with prizes aggregating 18,000 rubles, or approximately \$9,000, divided into nine prizes, one of 6,000 rubles, approximately \$3,000; two of 3,000 rubles each, and six of 1,000 rubles each.

The subjects of this competition are as follows:

1. A scheme for the removal of wounded from the battlefield with the minimum number of stretcher bearers.
2. Portable (surgeons') washstands, for use in the field.
3. The best method of packing dressings for use at first aid and dressing stations.
4. Wheeled stretchers.
5. Transport of stretchers on mule back.
6. Easily folding portable stretchers.
7. Transport of the wounded between warships and hospital ships, and the coast.
8. The best method of heating railway cars by a system independent of steam from the locomotive.
9. The best model of portable Roentgen apparatus, permitting utilization of x-rays on the battlefield and at first aid stations.

The maximum prize will be awarded to the best exhibit, irrespective of the subject, and so on.

The general exhibit is again divided into two parts; the first will be an exhibition by the various Red Cross Associations of the world. The second will be devoted to exhibits by individuals or business houses of any articles having to do with the amelioration of the sufferings of sick and wounded in war, which are not covered by the Marie Feodorovna prize competition for the year. While the American Red Cross will be glad to have any articles pertaining to medical and surgical practice in the field, it is especially anxious to secure a full exhibit relating to preventive measures in campaign. Such articles will be classified as follows:

1. Apparatus for furnishing good water in the field.
2. Field apparatus for the disposal of wastes.
3. Shelter such as portable huts, tents and the like, for hospital purposes.
4. Transport apparatus (to prevent the suffering of sick and wounded) exclusive of such apparatus as specified for the Marie Feodorovna prize competition.

As with the Marie Feodorovna prize competition, for this country only articles having the approval of the central committee of the American Red Cross will be accepted.

Diplomas will be awarded for exhibits in this section of the exhibition as approved and recommended by the jury.

Further information may be obtained from the Chairman, Exhibition Committee, American Red Cross, Washington, D. C.

It is perhaps to apparatus having to do with prevention of disease in armies that the energies of Americans have been specially directed since the Spanish-American war. Therefore, the last mentioned section of the exhibition should make an appeal to them.

NEWS

Dr. H. N. Torrey, 505 Shurly Bldg., Detroit, announces that hereafter he will limit his practice to surgery.

Dr. Eryl S. Peterson of Jackson has been appointed a member of the Medical Reserve Corps of the Army with rank of first lieutenant from Jan. 17, 1912.

Dr. W. E. Dockry, formerly of Pentwater, has removed to Urbandale (R.F.D. 4, Battle Creek), and has transferred his membership from the Muskegon-Oceana County Medical Society to the Calhoun County Medical Society.

Dr. Ralph O. Fuerbringer, who has been home for a few weeks on account of a severe attack of diphtheria contracted while on the staff of the clinic of the University of Marburg, has just received a flattering offer of a place on the staff of the surgical clinic of the University of Königsburg. As yet he has not decided whether he will return to Germany.—*Saginaw Courier-Herald*.

Operation of the pure food decision prohibiting the use of saccharin in food stuffs which was to have become effective February 1, after two postponements, again has been extended to March 1. The delay is said to be due to the fact that the Board of Appeals (Three Secretaries Board) has not had time to consider the case fully. Manufacturers asked for a modification of the regulation so that saccharin might be employed in amounts not exceeding "one hundredth grain in any one food."

According to Bulletin 109 on Mortality Statistics for 1910, just issued, tuberculosis is the greatest cause of death in people from 10 to 50 years of age. Organic disease of the heart constituted the most important cause of death at each age period between 50 and 90 years. Cancer caused 9 per cent. of deaths from 40 to 49 years, 12 per cent. from 50 to 59 years and 11 per cent. from 60 to 69 years. Cerebral hemorrhage (apoplexy) caused 7.5 per cent. of all deaths 50 to 59 years, 10.7 per cent. 60 to 69 years, 12.1 per cent. from 70 to 79 years, and 10.8 per cent. from 80 to 89 years. Pneumonia caused 7.1 per cent. of all deaths from 30 to 39 years, 7.8 per cent. from 40 to 49 years, 7.6 per cent. from 50 to 59 years, and 7.1 from 60 to 69 years.

The American Hospital Association will hold its next annual meeting in Detroit, September 24, 25, 26 and 27. The executive committee is composed of Dr. W. L. Babcock, Mr. T. E. Moulder, Dr. E. B. Smith, Miss Sydenham Mellville and Mr. Del Sutton. Applications for membership may be had by addressing the secretary, Dr. J. N. A. Brown, Toronto, Canada.

Questions regarding hospital finance, and prevention of waste, medical organization, management of infectious diseases, the out-patient department, social service, municipal needs and policies relating to the care of the sick, hospital dietaries, the best method of purchasing, the training of superintendents and heads of departments, hospital accidents, and a great variety of similar practical subjects, important to all hospitals will be discussed, so that the experience of one hospital may be made known and used for the benefit of all.

The University of Michigan will this year celebrate the seventy-fifth anniversary of its founding. A committee has been made up of representatives from the Board of Regents, from the University Senate, from the Alumni Association, and from the Michigan Union to perfect plans for the celebration. While the details of the plans have not yet been worked out, it has been determined by the committee, however, that the celebration shall be held during Commencement week, June 23 to 27 inclusive. It is probable that three principal addresses will be given during the celebration, one Sunday, June 23, to take the place of the ordinary baccalaureate address, one Wednesday morning, June 26, and another upon the occasion of Commencement, June 27. Distinguished speakers from different parts of the country will be secured for these addresses.

BOOK NOTICES

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., and Leighton F. Appleman, M.D. Dec. 1, 1911. Lea & Febiger, Philadelphia and New York. \$6 per annum.

This volume contains the advances in various fields of medicine and surgery as reviewed by R. S. Lavenson (diseases of the kidneys); C. W. Bonney (Genito-Urinary Diseases); J. C. Bloodgood (Surgery of the Extremities, etc.), and H. R. M. Ladis (Therapeutic Referendum).

The Chapter by Bloodgood is especially good, his treatment of fractures being not only timely in view of the number of fractures causing malpractice suits, but being particularly well illustrated.